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TRANSACTIONS

OF THE

MEDICAL SOCIETY

OF THE

STATE OF NEW YORK,

FOR THE YEAR 1882.

PUBLISHED BY THE SOCIETY.
1882.
TRUAIR, SMITH & BRUCE, PRINTERS AND BINDERS,
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MEDICAL SOCIETY

OF THE

STATE OF NEW YORK.

ORGANIZATION.

By an act of the Legislature passed April 4, 1806, and subsequently amended, the Medical Society of the State of New York is organized as follows:

The Society is composed of delegates, permanent members, and honorary members.

I. DELEGATES.

Delegates are sent by County Medical Societies, certain Medical Colleges, and by the New York Academy of Medicine. Each County Medical Society is entitled to as many delegates as there are Assembly Districts in said County. Each incorporated Medical College, which, by its charter, may be represented in this Society, is entitled to one delegate, and the New York Academy of Medicine to five delegates.

Delegates from County Medical Societies are elected by ballot at annual meetings of the Societies. The term for which they are elected is four years, and, as nearly as possible, one-fourth of the whole number is annually elected.

The credentials of all delegates must be duly authenticated by the seal of the organization which they represent, and the signature of its Secretary.

The organizations entitled to representation in this Society, are required by its by-laws, to pay to the Treasurer, for the

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use of the Society, five dollars annually, for each delegate they are entitled to send; and no delegate is permitted to inscribe his name in the Register, at the annual meeting, until the dues against the organization he represents have been paid.

The following table exhibits the classification of Counties and Colleges, as respects the election of delegates, and shows when the present delegations become vacant:

VACANT.	VACANT.	VACANT.	VACANT.
February 1, 1883.	February 1, 1884.	February 1, 1885.	February 1, 1886.
Allegany,	Chautauqua,	Albany,	Chenango,
Broome,	Dutchess,	Cattaraugus,	Clinton,
Delaware,	Essex,	Cayuga,	Columbia,
Franklin,	Fulton,	Chemung,	Cortland,
Genesee,	Greene,	Oneida,	Erie,
Livingston,	Jefferson,	Otsego,	Hamilton,
Monroe,	Lewis,	Richmond,	Herkimer,
Montgomery,	Niagara,	Rockland,	Kings,
New York,	Ontario,	Saratoga,	Madison,
Onondaga,	Orleans,	Schenectady,	St. Lawrence,
Orange,	Putnam,	Steuben,	Suffolk,
Oswego,	Queens,	Sullivan,	Ulster,
Rensselaer,	Schoharie,	Tioga,	Washington,
Schuyler,	Warren,	Tompkins,	Wayne,
Seneca,	College Physicians and Surg'ns, N.Y.	Med. Dep. of Union University.	Westchester,
Wyoming,	Long Island College Hospital—16.	Med. Dep. of University of Buffalo	Univ. of City of New York Med. Dep.
Yates—17.		College of Medicine of Syracuse University—17.	New York Academy of Medicine.
			Bellevue Hosp Med College—18.

II. PERMANENT MEMBERS.

Permanent members are elected at the annual meetings of this Society from those who have attended as delegates, at least three meetings of this Society. They are elected from the Senatorial Districts of 1836, in the proportion of one permanent member to every eight delegates from the County Medical Societies to which the district may be entitled, and one for every additional fraction of one-half or more of this number. At the time of their election, permanent members must be residents of the districts which are credited with them, and in good standing as active members of their County Societies.

Each permanent member on his election shall pay an initiation fee of five dollars, and also the annual dues of a perma-

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nent member for the year in which he was elected. If a permanent member-elect shall not pay his initiation fee within one year after his election, such election shall be void.

Permanent members are required to pay, annually, five dollars to the Treasurer, for the use of this Society, and no permanent member is allowed to inscribe his name in the Register, at the meetings of the Society, who has not paid his dues for that year, and all arrearages.

All annual dues are payable at the beginning of the session of the annual meeting of the Society.

Only delegates and permanent members whose names are inscribed in the Register are entitled to vote at the meetings of the Society.

III. HONORARY MEMBERS.

The Governor and Lieutenant Governor of this State, and the Judges of the higher courts during their term of office, shall be *ex-officio*, honorary members.

The Society may also, at the annual meeting, elect eminent physicians from other States or from foreign countries, as honorary members. They must have been nominated at a previous annual meeting, and those elected shall not exceed six in number in any year.

The Society may invite physicians who are present at any meeting to take seats as guests, but no physician of this State shall be so invited, who is not a member of a County Medical Society, entitled to representation in this Society.

Honorary members and invited guests shall have the privilege of a seat at the meetings, of presenting papers, and of taking part in the discussions, but they shall not vote on any question, nor be eligible to any office. Papers presented by them require a special vote by the Society, of reference to the Committee of Publication, in order to appear in the published Transactions.

MEETINGS.

The annual meetings of the Society shall be held at the Capitol, or some convenient place in the city of Albany, on the first Tuesday in February in each year, and other meetings at such

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time and place as may be determined by a majority of the Society convened at any legal meeting.

Fifteen members shall constitute a quorum for the transaction of business.

The Society may. from time to time, change the time of holding its annual meeting, in accordance with the provisions of Chapter V, Laws of 1876, being an "Act to enable the Medical Society of the State of New York, to alter the time of holding its annual meeting."

The Senatorial Districts established in 1836, and the Censorial Districts, are given in the following table. In connection with the name of each County, is placed a figure, to indicate the number of Assembly districts it contains, according to the apportionment made by the Legislature of 1879.

SOUTHERN CENSORIAL DISTRICT.

First Senatorial District.

Kings, 12.	New York, 24.	Richmond, 1.

Second Senatorial District.

Dutchess, 2.	Queens, 2.	Sullivan, 1.
Orange, 2.	Rockland, 1.	Ulster, 3.
Putnam, 1.	Suffolk, 1.	Westchester, 3.

EASTERN CENSORIAL DISTRICT.

Third Senatorial District.

Albany, 4.	Greene, 1.	Schenectady, 1.
Columbia, 1.	Rensselaer, 3.	Schoharie, 1.
Delaware, 1.		

Fourth Senatorial District.

Clinton, 1.	Herkimer, 1.	Saratoga, 2.
Essex, 1.	Montgomery, 1.	Warren, 1.
Franklin, 1.	St. Lawrence, 3.	Washington, 2.
Fulton and Hamilton, 1.		

MIDDLE CENSORIAL DISTRICT.

Fifth Senatorial District.

Jefferson, 2.	Madison, 1.	Oswego, 2.
Lewis, 1.	Oneida, 3.	Otsego, 2.

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SIXTH SENATORIAL DISTRICT.

Allegany, 1.
Broome, 1.
Cattaraugus, 2,
Chemung, 1.
Chenango, 1.
Livingston, 1.
Schuyler, 1.
Steuben, 2.
Tioga, 1.
Tompkins, 1.

WESTERN CENSORIAL DISTRICT.

SEVENTH SENATORIAL DISTRICT.

Cayuga, 2.
Cortland, 1.
Onondaga, 3.
Ontario, 1.
Seneca, 1.
Wayne, 2.
Yates, 1.

EIGHTH SENATORIAL DISTRICT.

Chautauqua, 2.
Erie, 5.
Genesee, 1.
Monroe, 3.
Niagara, 2.
Orleans, 1.
Wyoming, 1.

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OFFICERS AND COMMITTEES ELECTED FEBRUARY 9, 1882.

PRESIDENT.

HARVEY JEWETT, Canandaigua.

VICE-PRESIDENT,

E. D. FERGUSON, Troy.

SECRETARY,

WM. MANLIUS SMITH, 7 MYERS BLOCK, Syracuse.

TREASURER,

CHARLES H. PORTER, 55 EAGLE STREET, Albany.

CENSORS,

Southern District—J. W. S. GOULEY, C. R. AGNEW, AUSTIN FLINT, New York.

Eastern District—C. E. NICHOLS, M. H. BURTON, W. S. COOPER, Troy.

Middle District—ALONZO CHURCHILL, S. G. WOLCOTT, J. K. CHAMBERLAYNE, Utica.

Western District—C. C. WYCKOFF, THOS. F. ROCHESTER, Buffalo; HENRY LAPP, Clarence.

COMMITTEE OF ARRANGEMENTS.

S. B. WARD, Albany, WM. S. ELY, Rochester,
J. S. MOSHER, Albany.

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COMMITTEE ON BY-LAWS.

WM. C. WEY, Elmira. ALEX. HUTCHINS, Brooklyn.
WM. MANLIUS SMITH, Syracuse.

COMMITTEE ON HYGIENE.

E. V. STODDARD, Rochester. J. F. JENKINS, Yonkers.
STEPHEN SMITH, New York. CALEB GREEN, Homer.
JACOB S. MOSHER, Albany. EDWIN HUTCHINSON, Utica.
THEODORE DIMON, Auburn.

COMMITTEE ON LEGISLATION.

WM. H. BAILEY, Albany. F. R. STURGIS, New York.
A. VANDERVEER, Albany.

COMMITTEE ON MEDICAL ETHICS.

C. R. AGNEW, New York. E. M. MOORE, Rochester.
S. O. VANDERPOEL, Albany.

COMMITTEE ON PRIZE ESSAYS.

T. F. ROCHESTER, Buffalo. W. W. POTTER, Buffalo.
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COMMITTEE OF PUBLICATION.

WM. MANLIUS SMITH, Syracuse. H. D. DIDAMA, Syracuse.
CHARLES H. PORTER, Albany. J. F. JENKINS, Yonkers.

CENSOR FOR THE COLLEGE OF MEDICINE, SYRACUSE UNIVERSITY.

JOHN W. WHITBECK, Rochester.

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INAUGURAL ADDRESS,

DELIVERED FEBRUARY 7TH, 1882, AT THE OPENING OF THE SEVENTY-SIXTH ANNUAL MEETING,

BY THE PRESIDENT, ABRAHAM JACOBI, M. D.,

OF NEW YORK.

MR. VICE-PRESIDENT, MEMBERS AND DELEGATES:—The third quarter of our first century is just closing. Thus our annual meeting of to-day is one of unusual interest. The history of these seventy-five years, comprising almost the whole life of the republic, and also the greatest possible changes in the development of medical science, is of vast importance. At the time when this society was formed, Bichat first thought of establishing on a sound basis a pathology of the tissues; in this third quarter, cellular pathology, though open to further evolution, reigns supreme. Those times were still the periods of systems and schools; ours has succeeded in establishing scientific medicine on the sound foundation of close observation of the histological elements, and of experiment. This society, though we cannot boast of revolutionizing medical thought, has participated in the general progress; besides, the last decades have produced many original ideas, useful observations and much learning, and provided for American medical literature an honorable position. This honorable and honored position is not due to a particular class of men, though it be true that in modern times a large number of those who have given unusual splendor to the American name, are connected with medical schools as teachers of special branches. But when medical schools were but few it was in the profession at large that the men of learning, progress and influence were found. Even to-day, fortunately, this condition of things is

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not entirely changed; and the experience of a former time in Europe has in part repeated itself with us here. In all of the eighteenth century it was not the professors, but the practitioners who improved medical science.

It is fortunate for us that such is the case. Its increasing influence and power this society owes mainly to those who never presided in a lecture room. For it is a fact, that we, the delegates of the county societies mainly, and the very representatives of the profession, have had to rely less on the co-operation of the schools than on our own resources. It is true that our meetings take place in the midst of the college lecture terms, but there is no professor who could not spare us a day or two, and enjoy an audience of peers for once, in place of descending to pupils forever. Besides, there is no country in the world, but ours, in which the professor and the practitioner are so near kin. The professor was or is, almost in every case, a practitioner, and is selected from the ranks of the profession. Still more "*noblesse oblige.*" Those on the heights may well come amongst us. They will find eager listeners, and always be welcome. Moreover, many of the interests of the practitioner and the college teacher are identical. As far as the colleges are concerned, it is true that the progress of medical education is greatly due to their labors, but again it is true, that not long since a celebrated college publicly rescinded its own measures taken in the interest of a better preliminary education on the part of the matriculants. It is, however, a glorious fact in the history of the profession at large, that almost no year has elapsed without the discussion of proper measures for the advancement of medical education. This fact is in accordance with all our Republican habits and institutions which stimulate the masses into action in behalf of the general good. The consciousness of the necessity of advancement has certainly rooted first in the profession at large, and not a few of the colleges have consciously or unconsciously obeyed the requirements and dictates of public opinion, which is getting stronger and more elevated from day to day. In that respect it is with intense gratification that I learned of the resolution of the Medical Society of Oswego county excluding from the office of any of their members such as are desirous to commence the study of medicine without having first obtained a fair preliminary education, and that I am permitted to publicly recognize

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my appreciation of their action in the composition of the most important amongst the temporary committees of this society.

In regard to the colleges, it is but too well known that their requirements for graduation are certainly not always equally strict. We need not inquire into the reasons for this inequality of level, be they pecuniary, intellectual or other. But the fact is recognized, and nobody is more sorry for it than the profession. In the interest of both the public and the profession, medical education ought to be of the most advanced kind, and the license to practice ought not to be too easily obtained. Thus, the profession has for many years, insisted upon a change in the law which licenses practitioners of medicine. Perhaps it cannot be proven that any medical school ever opposed the establishment of a State Board of Examination, which alone might be authorized to convey the license to practice, the right of the colleges to confer diplomas notwithstanding. If they ever did, it is not probable that any college would now oppose any such movement, which I hope will be set on foot and result in the Legislature passing a proper law. For the good colleges would not be afraid of their graduates not passing the State Board, and no college would be willing to thwart the movement for fear lest its unwillingness to compete might be recognized as, or alleged to be, the result of incompetency.

The law of 1872, establishing a State Board of Examination, became inefficient in consequence of a clause added by some one at the eleventh hour, necessitating the mixing up of our intentions and interests with those of the homœopaths. I do not say that I believe that any ill-will or malice distorted the proposed bill, but the fact was really this, that at that time we were less inclined than many of us appear to be to-day, to go hand in hand with those with whom no tie of fellowship appeared to unite us but the sacred name of "physician." It is claimed by many that a co-operation with the homœopaths for the purpose of arranging State examinations would not be out of place, in the same degree as it certainly was eight years ago, at the present time.

It is generally asserted by many that there are good reasons for abolishing the boundaries between the several classes of medical men altogether. I do not speak of schools of medical

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men, for modern medicine is not divided into schools. The homœopaths claim that they do not differ from us any longer, do not mean to differ from us, as formerly they did and proudly claimed to do. If we have reason to believe, not only that medical science is one and indivisible, and based on logic and experimentation, but that we, the profession of the State of New York, are sufficiently imbued with that spirit of logic and experimental science, characteristic of modern medicine, we may overlook differences, and meet with a spirit of reconciliation, those who do not encounter us any more, so they say themselves, with the dicta of a school, or a sect, but who claim that each individual man amongst them stands on his own feet and does his own thinking. A crowd of men facing the profession with the battle cry of "*similia similibus*" and "no quarter," exclude themselves and cannot expect kind treatment at our hands. When the ranks, however, are dissolved, and no *corps d' esprit* makes them raise the flag of hostility, and, instead of a fighting army under orders, men come into your camp for reconciliation, and a parley, the case is different.

There is that other consideration. We are not the only class of what the State calls "lawfully qualified practitioners." It is in our interest, and has always been the effort of the professional men of the State, to better the condition of the profession and the public by the elevation of the standard of education. It is desirable that no part of the medical practitioners should be excluded from the benefits of such efforts or from co-operation in that direction. It is more than expedient, it is absolutely necessary, that in many steps to be taken before the Legislature of the State we should be in full concord with those who share with us the honor of being called lawful practitioners. Whatever you shall decide, I know it will be done with deliberation and wisdom. Whatever your decision shall be, I will be the first to obey it, and hope that whatever laws we shall have, they will not be enforced on the young and powerless only, and broken by the mighty and independent. In that hope, I am quite prepared to submit to the reports and recommendations of your committees on legislation and on the revision of the code of ethics. I abstain, therefore, from further remarks on that theme.

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In accordance with the interest this Society has always taken in all matters of public hygiene and welfare, I have a word to say in regard to some contagious diseases devastating both the large cities and the country. It is certain that both scarlatina and diphtheria are contagious. It is also certain that the possibility and probability of contagion extends over the whole duration of the disease, and is enhanced by the accumulation of the poison produced by the accumulation of cases. It is also certain that without thorough disinfection, mainly by sulphurous acid, the poison is not destroyed and will remain active. It is just as certain that when you enter a room full of healthy and boisterous children playing around the bed of one of them stricken with a bad form of diphtheria and scarlatina, a goodly percentage will be dead within a week or two—it is reasonably certain that the immediate removal of the one who is sick, or of those who are well, would improve the chances of the first, and probably save all. It is also certain that a case of diphtheria in comfortable quarters in a well to do family will infect its clothing, bedding and all surroundings; it may get better—have another attack and one more serious—may get well—will be taken again still more seriously than before, and will not be checked in its road to destruction except by removal from its quarters replete with comforts, poison and death. Several such cases I know to have been saved by their removal to a proper isolating room in a public institution of the city. Every one of you has seen those who have been or could have been saved by removal and strict isolation, aside from those who live in an infected, unclean, reeking neighborhood. The mortality from scarlatina and diphtheria in the large cities is fearful. The complication of the two scourges has increased the danger attending them. Not desiring, however, to discuss this subject with which you are but too familiar any further, I refer you to an occurrence in New York city which resulted in the following letter of the President of the Society for the Prevention of Cruelty to Children, to the Mayor of New York, part of which is here read:

"Very recently this society was called upon to remove certain children from the infant asylum, No. 21 University Place, in this city, where, upon examination it appeared that there were over eighty children of tender years in the same building

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with cases of scarlet fever, diphtheria, whooping cough, and subsequently of measles. The society immediately invited the attention of the Board of Health thereto, with a view to the immediate removal of the children afflicted with these contagious diseases, but received this astounding statement from the board:

'Our reception hospital is the only place we at present have for the care of such cases. The reception hospital was built not for continuous occupancy, but merely as a place where cases of contagious disease may have shelter and be made comfortable while waiting for the arrival of the boat to convey them to the island. Within the past year the buildings on the island were so crowded with cases of small-pox, typhus and typhoid fever, that we have there no room for scarlet fever and diphtheria. Therefore, we have been compelled to take such cases as have been forced upon us, and give them the best care we could at the reception hospital, though always at the risk of their taking some other disease. * * * Our facilities for the care of such cases are so limited that we are often greatly embarrassed, being compelled frequently to refuse patients admission for want of room, greatly to our own annoyance as well as to that of the patients' friends.' "

I submit to you, delegates and permanent members of the Medical Society of the State, the above remarks, without any additional ornamentation, without an attempt at oratorical pleading, as a matter to be carefully considered. The large cities require a place, or places, for the isolation and treatment of cases of scarlatina and diphtheria. Not only the tenement population, but the rich, also, are in need of them. A hospital of the kind could be made, partly, a self-sustaining institution, although the necessity of providing a room for every single case and a numerous supply of good nurses, the extra work of constant disinfection, etc., would render a hospital of that kind expensive.

I can state that my suggestion has not been considered Utopian by some with whom I have conversed on the subject. Pecuniary support has been offered in several instances without my asking, and the support of the President of the Society for the Prevention of Cruelty to Children was readily

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promised. But while all this is gratefully remembered by me, I know that the object in view will be more readily accomplished if this great and influential body will lend its support. I hope that a motion will prevail to suggest the necessity of establishing hospitals for the treatment of diphtheria and scarlatina within the limits of the large cities. The scientific opinion of this society, when publicly and solemnly expressed, will contribute much to allay the fears of the community in regard to any alleged danger resulting from the proximity of such institutions, and to prove the necessity of avoiding the fatal mistake of insisting upon the removal of such patients to a distant hospital.

The last subject to which I desire to direct your attention is the danger to life and limb of the factory children. The number of children employed in factories is increasing yearly, and not only accidents, but permanent diseases and deformities increase at a much higher rate. If you so order, I shall present to your committee on legislation the proofs I have collected and the reason for my desire that this society should commit itself in behalf of a law to be passed by the Legislature for the purpose of protecting early childhood from factory work and factory influence. Bills of that class have passed the Legislatures of several States—New Hampshire, Massachusetts, Connecticut, Ohio, Pennsylvania—but they are insufficient. A bill such as I should contemplate, would comprise a few points of the following nature:

First. Children employed in factories should be under official supervision. In large cities the Boards of Health could be entrusted with this supervision. In England, France, Germany and Austria it is the business of officers appointed for that special purpose.

Second. Before being admitted to factory work, a child, of legal age, ought to be examined. Chlorotic, anæmic, scrofulous, crippled, scorbutic, bronchitic and phthisical children, and those under the normal size of their ages, must be excluded. Manufacturers and physicians will always differ on these points. The certificates of the latter ought to be conclusive.

Third. No night, or Sunday work to be permitted.

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Fourth. Some branches of work are to be forbidden entirely. There are some which are known to interfere with physical development, and others which are known to prove highly disastrous to childhood and adolescence for various reasons. These are mining, glassworks, rag sorting, employment on mercury, lead, arsenic, iron and brick works, and match factories. According to Popper's researches, the number of deaths in young persons is very great in glove factories, amongst jewelers, printers and lithographers, waiters, turners, locksmiths, bookbinders—while gardeners, millers, coachmen, carpenters, butchers, brewers, varnishers, and bricklayers stand a better chance.

Fifth. The earliest age at which the young should be admitted to manufacturing employments, ought to be fourteen. Up to the period of puberty the organism must not waste the energy required for the development of both body and mind. It is quite possible that the manufacturer has plenty of opportunities for the employment of those younger, but the community, the state, the welfare of the republic, require energies which are not wasted, bodies which are not crippled, and souls and minds which are not entirely withered. The commonwealth has as much claim in that direction as it has in regard to compulsory education, compulsory—in spite of ludicrous fanatics—vaccination, and prohibitory or compulsory health regulations.

Finally, at the close of this introduction to your work, I beg of you the permission to venture upon a personal remark.

Twenty-eight years ago a young refugee from European state-prisons set foot on the hospitable shores of this continent. The homeless wanderer is to-day the proudest of your number, for a year ago this week you elected him to the most honorable and honored position the profession of this great State can fill. That I did not work for the attainment of this honor, your nominating committee of last year know; that I did not expect it, I assure you; that I hoped for it at some distant future, I admit; that I deserved it for what services I may have rendered to either the profession or science I cannot prove, but that I meant to be worthy of it in the future I know. You will be good enough to accept my earnest and sincere thanks for the honor you last year conferred upon me,

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the first foreign-born president of this society, as far as I know; the first, certainly, since the profession of the State counted amongst its members the great number of men deservedly known and appreciated in the State and far beyond its boundaries, even in the Eastern Hemisphere. For when Virchow speaks of the intellectual capital invested by Europeans in America which returns to Europe with ample interest he thinks of New York State amongst the first to be considered.

I trust that I know something of the profession in the different States and nations of Europe. I know there is no national profession with the same spirit of hospitality to both new men and new ideas; the same impartiality and absence of territorial narrow-mindedness, which is prevalent amongst the medical citizens of the United States. That may not be, and probably is not, a merit of ours. For I think that those who are born and bred in a republican community, where every one is the peer of the other, respecting his neighbor, as, and because he respects himself, are more apt to become also conscious citizens of the republic of letters and science. May that spirit remain intact and chaste for the fourth quarter of this century and for centuries to come, in the life of the Medical Society of the State of New York.

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MEMBERS IN ATTENDANCE AT THE ANNUAL MEETING OF 1882.

DELEGATES.

Albany County:
J. D. Featherstonhaugh, Cohoes.
Thomas Holmes, McKownsville.
Jos. W. Moore, Cohoes.
Eugene Vanslyke, Albany.

Medical Dep't., Union University:
Samuel B. Ward, Albany.

Broome County:
L. D. Witherill, Union.

Cayuga County:
John Gerin, Auburn.
Frank Kenyon, Scipio.

Chautauqua County:
H. R. Rogers, Dunkirk.

Chenango County:
M. D. Spencer, Guilford.

Clinton County:
L. C. Dodge, Rouse's Point.

Columbia County:
Thomas Wilson, Claverack.

Dutchess County:
Edwin Barnes, Pleasant Plains.
Alfred Hasbrouck, Poughkeepsie.

Erie County:
Lucien Howe, Buffalo.
S. E. S. H. Nott, Hamburg.

Essex County:
Conant Sawyer, Au Sable Forks.

Franklin County:
A. M. Phelps, Chateaugay.

Fulton County:
Charles M. Leffler, Gloversville.

Genesee County:
W. W. Potter, Buffalo.

Greene County:
Chas. E. Willard, Catskill.

Herkimer County:
A. Walter Suiter, Herkimer.

Jefferson County:
James D. Spencer, Watertown.

Kings County:
George W. Baker, Brooklyn.
John Byrne, Brooklyn.
Thomas R. French, Brooklyn.
G. G. Hopkins, Brooklyn.
Jos. H. Hunt, Brooklyn.
Charles Jewett, Brooklyn.
Frank M. Rockwell, Brooklyn.
John C. Shaw, Brooklyn.
S. Sherwell, Brooklyn.

Long Island College Hospital:
James S. Wight, Brooklyn.

Lewis County:
W. H. Johnson, Port Leyden.

Madison County:
A. D. Head, Eaton.

Monroe County:
J. O. Roe, Rochester.
Charles S. Starr, Rochester.
J. W. Whitbeck, Rochester.

Montgomery County:
Wm. H. Robb, Amsterdam.

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New York County:
L. Duncan Bulkley, New York.
C. S. Bull, New York.
Wesley M. Carpenter, New York.
Geo. Henry Fox, New York.
V. P. Gibney, New York.
H. T. Hanks, New York.
Daniel Lewis, New York.
Arthur V. B. Lockrow, New York.
A. C. Post, New York.
E. H. M. Sell, New York,
F. R. Sturgis, New York.

New York Academy of Medicine:
Wm. R. Birdsall, New York.
Louis Elsberg, New York.
A. M. Jacobus, New York.

College of Physicians and Surgeons:
John G. Curtis, New York.

Niagara County:
M. S. Kittinger, Lockport.

Oneida County:
H. C. Palmer, Rome.
George Seymour, Utica.

Onondaga County:
Henry B. Allen, Baldwinsville.
J. H. Graves, Syracuse.

College of Medicine, Syracuse Univer.:
Wm. T. Plant, Syracuse.

Ontario County:
F. D. Bentley, Cheshire.

Oswego County:
Charles R. Lee, Fulton.
D. Pardee, Fulton.

Otsego County:
E. E. Houghton, Schenevus.
Abram S. Seeber, Milford.

Putnam County:
J. Q. Adams, Carmel.

Rensselaer County:
C. H. Turbeck, Troy.
W. S. Cooper, Troy.
R. D. Traver, Troy.

St. Lawrence County:
J. E. Colburn, Canton.
G. G. Monroe, Crary's Mills.

Schenectady County:
Maurice Perkins, Schenectady.

Schoharie County:
W. S. Layman, Schoharie.

Seneca County:
John B. Chapin, Willard.

Steuben County:
G. Allison, Wayne.
M. J. Baker, Hornellsville.

Tompkins County:
John E. Beers, Danby.

Ulster County:
E. H. Loughran, Kingston,
Edward McKenzie, Port Ewen.
H. R. Winter, Phœnicia.

Washington County:
John Lambert, Salem.
Theodore C. Wallace, Cambridge.

Wayne County:
Jason Parker, Clyde.

Westchester County:
Albert C. Benedict, Yonkers.
Archibald M. Campbell, Mt. Vernon.

Wyoming County:
Geo. M. Palmer, Pike.

PERMANENT MEMBERS.

C. R. Agnew, New York.
L. J. Ames, Mt. Morris.
Geo. W. Avery, Norwich.
Alexander Ayres, Fort Plain.
James S. Bailey, Albany.
W. H. Bailey, Albany.
L. Barton, (R) Wellsboro.
Eugene Beach, Gloversville.
Frank D. Beebee, Hamilton.
R. B. Bontecou, Troy.
Z. B. Bridges, Ogdensburg.
M. H. Burton, Troy.
J. E. Casey, Mohawk.
Walter B. Chase, Brooklyn.

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Geo. W. Cooke, Otego.
Wm. H. Craig, Albany.
H. S. Crandall, Leonardsville.
W. W. Crandall, Andover.
John Davidson, Hempstead.
George Douglas, Oxford.
H. G. DuBois, Camden.
G. W. Earll, Skaneateles.
E. F. Edgerly, Mineville.
W. S. Ely, Rochester.
E. D. Ferguson, Troy.
Austin Flint, New York.
Robert Frazier, Camden.
S. H. Freeman, Albany.
S. H. French, Amsterdam.
P. R. Furbeck, Gloversville.
William Govan, Stony Point.
Henry Gray, Greenwich.
John P. Gray, Utica.
F. S Greene, Coxsackie.
Jacob Hunt, (R) Utica.
N. C. Husted, Tarrytown.
E. Hutchinson, Utica.
James C. Hutchison, Troy.
Abraham Jacobi, New York.
J. Foster Jenkins, Yonkers.
Harvey Jewett, Canandaigua.
Herman Knapp, New York.
J. K. Leaning, Fly Creek.
Joseph Lewi, Albany.
David Little, Rochester.
A. J. Long, Whitehall.
Frank S. Low, Pulaski.
E. M. Lyon, Plattsburgh.
LeRoy McLean, Troy.
Henry March, Albany.
E. M. Moore, Rochester.
Jacob S. Mosher, Albany.
B. A. Mynderse, Schenectady.
C. E. Nichols, Troy.
H. D. Noyes, New York.
D. V. O'Leary, Albany.
John Ordronaux, Roslyn.
A. R. Otis, Dundee.
F. B. Parmele, Greenbush.
John Parr, Buel.
Israel Parsons, Marcellus.
H. G. Piffard, New York.
Thos. R. Pooley, New York.
Charles H. Porter, Albany.
T. B. Reynolds, Saratoga Springs.
D. B. St. John Roosa, New York.
Wm. P. Seymour, Troy.
J. P. Sharer, Little Falls.
B. F. Sherman, Ogdensburgh.
Wm. Manlius Smith, Syracuse.
Norman L. Snow, Albany.
Morgan Snyder, Fort Plain.
E. R. Squibb, Brooklyn.
T. H. Squire, Elmira.
C. L. Stiles, Owego.
E. V. Stoddard, Rochester.
Wm. T. Swart, Canandaigua.
Wm. Taylor, Canastota.
S. O. Vander Poel, New York.
A. Vanderveer, Albany.
R. H. Ward, Troy.
William C. Wey, Elmira.
C. E. Witbeck, Cohoes.

INVITED GUESTS.

Brayton Babcock, Friendship.
Theo. P. Bailey, Albany.
F. J. Baker, Lockport.
Lewis Balch, Albany.
O. D. Ball, Albany.
E. A. Bartlett, Albany.
M. L Bates, Canaan Four Corners.
John C. Burdick, Johnstown.
H. S. Case, Albany.
J. P. Creveling, Auburn.
S. G. De La Mater, Duanesburgh.
Isaac DeZouche, Gloversville.
A. Ennis, Pattersonville.
T. Featherstonbaugh, Albany.
Lucius E. Felton, Potsdam.
J. F. Fox, Cohoes.
Wm. Geoghan, Albany.
T. Z. Gibbs, Fort Ann.
I. N. Goff, Cazenovia.
D. H. Goodwillie, New York.
J. W. Gould, Albany.
C. W. Greene, Albany.

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Wm. Hailes, Albany.
Lorenzo Hale, Albany.
C. W. Hamlin, Middleville.
Henry T. Harris, Laurens.
L. H. Hills, Cooperstown.
C. F. Huddleston, Albany.
A. B. Huested, Albany.
P. J. Keegan, Albany.
M. J. Lewi, Albany.
John P. Lockwood, Albany.
S. R. Morrow, Albany.
A. Nellis, Port Jackson
W. J. Nellis, Albany.
Samuel Peters, Cohoes.
Otto Ritzman, Albany.
T. L. St. John, Troy.
E. C. Seguin, New York.
Edward H. Squibb, Brooklyn.
H. R. Starkweather, Albany.
John B. Stonehouse, Albany.
E. B. Tefft, Albany,
John Thompson, Albany.
L. A. Tourtellot, Utica.
Franklin Townsend, Albany.
T. M. Trego, Albany.
W. G. Tucker, Albany.
S. O. Vander Poel, Jr., Albany.
D. E. Walker, Ilion.

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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE STATE OF NEW YORK,

AT ITS

SEVENTY-SIXTH ANNUAL MEETING,

HELD IN

Geological Hall, Albany, February 7, 8 and 9, 1882.

FIRST DAY—MORNING SESSION.

The Society was called to order by the President, Dr. Abraham Jacobi, of New York, at 10 h. A. M., Tuesday, February 7th, 1882.

Prayer was offered by Rt. Rev. W. C. Doane.

The inaugural address was delivered by the President, and, on motion, referred to a special committee to be appointed by the chair. The following committees were then announced:

Business Committee—Drs. D. B. St. John Roosa, Wm. S. Ely, Charles R. Lee.

Committee on Credentials—Drs. Robert Frazier, F. R. Bentley, Wm. Taylor.

After a short recess, to allow members to register, the regular order of business was taken up.

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Communications from County Medical Societies were called for, each county by name. Dr. Wesley M. Carpenter, of New York, presented the following from the Medical Society of the County of New York:

1. Copy of some amendments to its own by-laws.

This was referred to the Committee on By-Laws.

2. Proposed changes in the Act of May 29th, 1880, regulating the practice of medicine, and in Chapter 746 of the Laws of 1872, with regard to the examination of candidates for medical practice by a board appointed by the Regents of the University.

This was referred to the Committee on Legislation.

The Special Committee on the Code of Ethics, reported an amended code of ethics, and requested that this evening's session be devoted to its consideration. On motion this request was granted.

The Committee on Prize Essays made a report,* which was adopted, and the committee discharged.

The Censor for the College of Medicine, Syracuse University, made a report which was accepted and referred to the Committee of Publication.

Resolutions being in order, Dr. Daniel Lewis offered the following:

Resolved, That this Society be requested to give an opinion as to the legality of County Medical Societies levying assessments, in excess of the annual dues prescribed by their by-laws.

Dr. S. O. Vander Poel remarked that this was a local question to be decided by the County Societies themselves. On motion the resolution was laid on the table.

The Business Committee offered the following:

Resolved, That not more than twenty minutes be allowed for the reading of any paper, during the present meeting of this Society, and that any motion to extend the time, shall be declared out of order.

Dr. H. D. Noyes, of New York, offered as an amendment, "that the time may be extended by unanimous consent." After some remarks by the Chairman of the Business Committee as to the necessity of a strict adherence to the rule pro-

*The Reports are printed together at the end of the Proceedings.

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posed, Dr. Noyes withdrew his amendment, and the resolution was adopted by the Society.

The Business Committee recommended that the daily sessions of this annual meeting be from 10 h. A. M. to 1 h. P. M., from 3 h. P. M. to 6 h. P. M., and that the evening session commence at 8 h. P. M. The recommendation was adopted.

Dr. S. B. Ward, of Albany, Chairman of the Committee of Arrangements, proposed the names of several gentlemen, who were thereupon, by vote of the Society, received as invited guests.*

The Business Committee then announced the reading of papers as the next order of business.

Dr. F. R. Sturgis, of New York, read a paper "Hints and Suggestions upon Medical Education," which was discussed by Drs. Roosa, Perkins, E. M. Moore, Piffard and Sturgis.

Dr. E. R. Squibb, of Brooklyn, read "Note on Clinical Thermometers." It was discussed by Drs. Perkins and Squibb.

The following were read by title:

Obituary Notice of Dr. Levant B. Cotes, by W. W. Potter, M. D.

Obituary Notice of Dr. John F. Whitbeck, by H. H. Langworthy, M. D.

The Business Committee asked for the suspension of the last six lines of Section I, Chapter IV of the By-laws, in order that the experiment might be tried of having the report of the Committee of Nomination made at the evening session of Wednesday. Objection was made, and so the suspension of the by-law was refused.

Dr. W. S. Ely read a "Note on Beef Juice," and in connection with it showed a fruit-press as a suitable implement in the preparation of the juice. The paper was discussed by Drs. Noyes, Perkins and Gray. The President suggested 60° C (140° F) as the temperature to which the beef juice should be raised.

*The names of these gentlemen, and of all the others, who during the meeting were received as guests, are given in the list of Invited Guests, on pages 19 and 20.

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After attention had been called by the President to the meetings of the members by Senatorial Districts immediately after adjournment, the session was closed at 1 h. P. M.

FIRST DAY—AFTERNOON SESSION.

The meeting was called to order by President Jacobi, at 3 h. 15 m. P. M.

The President announced as the Special Committee on the Inaugural Address, Drs. E. M. Moore, of Monroe County, S. O. VanderPoel, of New York County, and J. P. Gray, of Oneida County.

Dr. S. O. VanderPoel then read a paper, "The Present Condition of the Tuberculosis Question." This was discussed by Dr E. M. Moore, S. O. VanderPoel, and by the President, at the request of the members.

Dr. W. W. Potter, of Buffalo, read "The Genu-Pectoral Posture, in the treatment of Retro-displacements of the Uterus, and in Dislocations of the Ovaries."

The reports of the several Senatorial District meetings held after the morning session, having been handed in, the President announced the following as the Committee of Nomination.

From the Society at Large—Dr. Wm. C. Wey, of Chemung County.

Elected by the several Senatorial District Meetings:

First District—Thomas R. Pooley, of New York Co.

Second District—J. Foster Jenkins, of Westchester Co.

Third District—Norman L. Snow, of Albany Co.

Fourth District—B. F. Sherman, of St. Lawrence Co.

Fifth District—Wm. H. Johnson, of Lewis Co.

Sixth District—C. L. Stiles, of Tioga Co.

Seventh District—John Gerin, of Cayuga Co.

Eighth District—W. W. Potter, of Erie Co.

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The Business Committee read by title, "Biographical Sketch of Dr. J. P. Boyd," by Thomas Hun, M. D.

Dr. E. C. Seguin, of New York, an invited guest, read, "Effectual Dosage of Certain Remedies, in the Treatment of Nervous Diseases." This paper was discussed by Drs. Gibney, Chase, Allison and Stoddard, and was on vote of the Society, referred to the Committee of Publication.

Dr. Charles S. Bull, of New York, read a paper, "Syphilitic Diseases of the Lachrymal Apparatus." It was discussed by Dr. H. D. Noyes.

The Business Committee read by title, Biographical Sketch of Dr. J. P. Boyd, by S. H. Freeman, M. D.

Dr. Lucius E. Felton, of Potsdam, an invited guest, read, "A new Galvanic Battery," which was discussed by Drs. Sherman and Birdsall, and referred by vote to the Committee of Publication.

The Society then adjourned till evening.

FIRST DAY—EVENING SESSION.

The Society convened at 8 h. P. M., the President in the chair.

The Business Committee announced the order of business to be the reception and consideration of the report of the Special Committee on Code of Ethics.

Dr. H. G. Piffard, of New York, secretary of the Committee, read the report,* and afterwards moved its adoption, after reading it, section by section. The motion was however withdrawn.

Dr. D. B. St. John Roosa, of New York, moved the report be accepted. The motion was carried.

Dr. C. R. Agnew, of New York, moved that it be taken up and discussed seriatim. Dr. Roosa moved as an amendment, that the report be discussed as a whole. The amendment was carried.

* Printed with the Reports.

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Dr. ROOSA then rose and said: Mr. President:—If the Society will bear with me in a few remarks I will at their close offer a substitute for this report. I recognize the character of the gentlemen who have made this report. Without exception they are the honored servants of this Society; without exception they have had peculiar opportunities to learn the will of the profession in this State, with regard to the Code of Ethics. I recognize also, Mr. President, the very great difficulty under which this distinguished committee has labored, for I remember that behind them are the traditions of a profession that believed it was necessary to bind each other with very strong legal bonds in order to prevent harm. I remember that they saw the traditions which were thought to be as obligatory as those of the Mosaic code, and necessary in order to promote righteousness among medical men. I therefore see their difficulties, and I honor the result of their labors. I believe that it presents a great advance over anything which has been offered to our profession up to this time. But, my objection to this report is that it contains nearly every one of those things which in the progress of time have become distasteful to the profession of our day. I believe that it contains in it the very intrinsic objections which we constantly make against the code which I hold in my hands—this sentimental code of our forefathers, which tells us how our patients should behave toward us and which enters into such innumerable details, as to the relations we sustain to our fellow-men, that it is impossible to believe that the authors of it thought the medical profession was entitled to any discretion in the management of its own professional affairs. I think that, if the committee had fully studied the sentiment of the profession of the Empire State, they would have wiped out the code of ethics from its beginning to its end. I believe they would have left such matters to be settled by the individual discretion and wisdom and the good faith of each man in affiliation with this Society. As to whether we should advertise in public handbills, private cards, or invite the attention of individuals afflicted with particular diseases, &c., I think there is no more necessity for any rule telling us what we should do in matters of that kind, than there is a necessity for telling Mr. William M. Evarts, or any other distinguished member of the bar of the city of New York, not to placard in the streets the enumerations of his skill.

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Then, Mr. President, I object also to this portion of the report of the Committee which prescribes the rules of consultations. This is a very carefully drawn section. It has evidently been conned with scrupulous care. As it now stands, every practitioner in affiliation with us is permitted to consult with any person he may choose, without fear of hindrance, be he homœopath, eclectic, or the seventh son of the seventh son, an Indian doctor, or whatsoever he may be; for that is all covered by the "emergency" clause. I ask if it was the intention of the Committee to open consultation with all sects in medicine, why not say so plainly? Why all these words? I resolved years ago that I would wait until the period had passed when it was of a pecuniary account to me whether I should consult with homœopaths or not, before I uttered a word upon the subject, although I have long believed that consultations should be free to all. Now, I may state this freely; while I do not think there is any member of this Society that holds the scientific observations of homœopaths in more contempt than I do, I believe that consultations should be untrammeled and their etiquette left to the discretion of each individual practitioner. Hence I object, as being unworthy of this great Society, to this portion of the report which details to us, as to children sitting at their mother's feet, the methods of conducting our consultations. Is it to be presumed that any gentleman, who has been invited in consultation, will deliberately steal away the patient, or give the impression that he is a better doctor than the one in attendance, or that he will resort to unwarranted tricks to supplant his brother member in the profession? If so, there are no bonds or laws, however rigid these laws may be, which can prevent the scoundrel from his dishonorable methods.

I consider that portion of the report which continues the binding restriction found in those paragraphs which state that all practitioners of medicine, their wives and their children, are entitled to the gratuitous services of any one or more of the faculty residing near them whose assistance may be desired, as unnecessary. I do not object to that because I believe that any member of this Society or of our profession would be unwilling to give time to the care of the family of a fellow practitioner who is in distress, but I think the time has gone by when the medical profession shall present themselves

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to each other as not entitled to benefit at the hands of those who can well afford to give a compensation. I think that the circumstances by which we are surrounded will regulate that question. I will not further take up the time in discussing the report of the Committee, but will close by saying that, in my judgement, it leaves the matter of ethics on the narrow and low level of the old code, and that it is not, therefore, entitled to our support. I offer a substitute for this report, in sure confidence, if unfortunately it should be unsuccessful to-night—which, from the sentiment which seems to be manifest in this meeting, I hope it will not be—that it is essentially the code of ethics which will be adopted in this Society before another decade has passed. It has been asked what will be our status before the American Medical Association if we adopt such a sweeping thing as this? In answer, it may be asked what will become of your status before that Association if the report of the Committee is adopted? Twenty-five minutes will suffice to rule the New York delegates out of the room. It is sufficient to do that, but this is not the question. The only question for us to decide, is it right? and if it is right the Empire State of New York should lead the van. I therefore offer the following substitute:

The Medical Society of the State of New York, in view of the apparent sentiment of the profession connected with it, hereby adopt the following declaration, to take the place of the formal code of ethics, which has up to this time been the standard of the profesion in this State:

With no idea of lowering, in any manner, the standard of right and honor in the relations of physicians to the public, and to each other, but on the contrary, in the belief that a larger amount of discretion and liberty in individual action, and the abolition of detailed and specific rules, will elevate the ethics of the profession, the medical profession of the State of New York, as here represented, hereby resolve and declare, that the only ethical offenses for which they claim and promise to exercise the right of discipline, are those comprehended under the commission of acts unworthy a physician and a gentleman.

***Resolved*, Also, that we enjoin the county societies and other organizations in affiliation with us, that they strictly enforce the requirements of this code.**

Dr. H. G. Piffard, of New York, moved that the substitute be referred to the standing Committee on Ethics, to be reported upon next year.

The motion was lost.

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Dr. SQUIRE, of Elmira: Mr. President—This report of the Committee comes far short of what we should have as a code of ethics. Whilst the greater part of it may be good it cannot properly be called a code; for, a code should be a system,—should be a whole; this is only fragmentary, it does not contain any declaration of the moral principles, the more important of them, which should govern us as a profession if we are to have a code. It does not contain one word in relation to the importance of medical education, and it also contains needless clauses, as Dr. Roosa has stated, with reference to the permission of members of this Society to meet in consultation those persons who are legally qualified practitioners, and technically we have persons legally qualified who have no medical education. Therefore, I think the report is defective in that respect. It does not require physicians to say that there is any dividing line between the practice of medicine and the practice of quackery, which I think is important in any code. The consultant is not required to strengthen the confidence of the patient and friends in the attending physician, which I think would not be necessary, however, if every member of our profession was a regularly educated man. Again, the physician is not cautioned in regard to taking care of a patient already under the care of another practitioner. Again, nothing is said in regard to confidential communications, and many other like omissions are found. Certainly if this code is to be adopted, it contains errors which must be corrected before we adopt it. For instance, in the twelfth and thirteenth lines we find this statement, "or through the medium of reporters or interviewers, or otherwise to permit their opinions on medical and surgical questions to appear in the newspapers." Now, if we adopt this report of the Committee to-night, and make it our code of ethics, we shall break it before morning by our opinions being published in the newspapers in Albany. However, although I am in favor of that sentiment, yet I do not see how we can prevent it. Again, I am not in favor of the report of the Committee as a whole. We must make a division between that which is good and that which is bad, and if we reach that conclusion we shall know where we stand. It has been said that it is derogatory to the profession, or that it is improper for physicians to publish in the newspapers the reports of cases where it is for their own glorification. But take, for instance,

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a case with which we are all familiar, that of the wounded President and those distinguished physicians who attended him. Their opinions were published in the newspapers, and it was for the good of the public, and it was justifiable. And now that which is good for the public may go into the newspapers, although it would be pleasant to me to keep all of our scientific discussions to ourselves; but we cannot always prevent them from going into the newspapers. Again, there are certain conventionalities which should be struck out, as for example under the rules governing consultations, it is stated that each of the consulting physicians, "beginning with the *youngest*," should deliver his opinion. I do not know that there is any moral foundation for any such conclusion. I think that might be struck out. Indeed, there is much which should be corrected before this report is adopted, but I will not consume more of the time of the Society.

Dr. S. O. VANDERPOEL, of New York: Mr. President—Let us for a moment see where we stand. The Special Committee upon the Code of Ethics after consultation have presented this report for adoption. That report is objected to upon the one hand by Dr. Roosa because, liberal as we have made it, it does not go as far as he thinks it should, and we have placed restrictions upon ourselves which Dr. Roosa wishes to have swept away. On the other hand, Dr. Squire thinks that we have swept away too much of our restrictions in some directions, and that we have not swept enough away in others. Now, let me state what was the spirit which governed us in making up this code as presented in this report. We reached the conclusion that it would be impossible to affect the relations of man to man or the gentlemanly conduct and behavior between man and man. We can not make a man a gentleman unless he is made so by nature; it is utterly impossible to bind men in these relations by any code of medical ethics. For that reason we left these things out of our report. Every one of Dr. Squire's references relate to conduct between man and man, and as we believe that no written restrictions can affect the moral character of the man we simply say that in our opinion we should govern our conduct in consultations as we have indicated in the report. Dr. Roosa goes further than we do, and he wishes to restrict the medical profession only by those influences which are comprehended under the

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bonds "worthy of a physician and gentleman," and says that it is utterly useless to make any obligation, and that it should be left to the moral decision of each practitioner, and if you choose to consult with any man you are perfectly at liberty to do so. I think the time has come when consultation should be made vastly more liberal than it has been. I have grown up with all the prejudices and tendencies of a man educated at the time I was, and during my entire life-time I have not consulted directly or indirectly with a homœopath, and therefore I can speak without fear or favor. But, for a few years past, I have been somewhat removed from active practice, and I have looked over the question a little more dispassionately, and it has struck me, as well as others, that our position in this respect was painfully narrow and restricted. If we can break down those barriers, and show up the homœopaths to the public, and break down the barrier which enables them to get sympathy from the public, and leave it openly with the conscience of every gentleman to go or not to go as he sees fit, I think it would be a very great advance. There are many physicians from the country here at this time, and doubtless they will support me in the statement, that the instances are not few in which there are two physicians in a village, one a homœopath and the other a regular physician, using the ordinary expression. The homœopathic physician perhaps has a severe case of sickness, and it becomes necessary to have consultation and advice, and the circumstances are such that he cannot send away to get such consultation and advice. Now, it seems to me to be cruel and heathenish, although I have done it myself over and over again, to hang upon a miserable code of ethics, and say I can not go. Such cases I believe should be left to the decision of the gentlemanly feeling and instinct of the man. We made a code as liberal as we can, and we go I think as far as Dr. Roosa does. I think he has made a very beautiful and almost eloquent expression of opinion relating to it, but I think there are certain things with reference to consultations upon which a little more extended expression of opinion should be given. I do not see that he differs to any great extent from the sentiment presented in the report of the Committee. We only say that there are certain things to be considered in consultation, and have thought it advisable to say "beginning with the youngest"

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with reference to an opinion upon the case. We have thought that wise, for the reason, that if you ask the elder one's opinion first, he naturally overawes the younger man. It was left in this way in order that the younger man may come out and express his opinion fully and freely in a consultation. Dr. Squire seems to think otherwise, but none of these things affect the morals or affect the principle, but merely aim to give some suggestion as to the manner in which the consultation should be carried out. Whether it is worth while to keep that paragraph in which relates to the treatment of the families of medical men, I am not quite sure, nor am I at all strenuous as to whether it shall be retained or not. It seems to me, personally, that it is rather useless; for, I believe that such matters will regulate themselves. If a man is able to pay, let him pay, but if a man is in moderate circumstances and is unable to pay for services of a physician it may be left to his own gentlemanly instincts to make a recognition of some kind which will be equally satisfactory to the physician who is called in consultation. My opinion is, however, that recognition of some kind, however moderate the circumstances of the physician, should be made to the consulting physician. I do not think that we differ very much, and I do not think when it comes down to a matter of fact that there is any essential difference in principle between the substitute offered by Dr. Roosa and the report offered by this Committee.

DR. H. G. PIFFARD, of New York: Mr. President—It appears to me that we should consider just the position that we are in now and that in which we are likely to be, when one or other of the propositions before us is adopted. Our present position is that we are under obligation to two codes: first, that of the American Medical Association; and second, the System of Ethics of the Medical Society of the State of New York. It is proposed on the one hand to revise the code of ethics, and it is proposed on the other to adopt a declaration of principles which is no code at all. The first question which this assembly wishes to decide is, whether we wish a code or not. Dr. Roosa's declaration is to the effect that we do not wish any code at all. On the other hand, if we wish a code let us discuss the present report of the Committee, and compare it with our present status. Do we need a code at all? If every qualified physician in the regular ranks always did what was

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right, always knew what was right to do, we should have but little need for a code. But experience has shown that physicians do not always know what is right, or, if they do, they do not always do it. In former times various offences were committed, such as public advertisements in the newspapers, either directly or indirectly, and private cards were passed around from one to another, handbills were circulated, etc., which rendered it necessary to restrict the action of medical men in that direction, and that was one of the reasons why the code of ethics was written. Do we wish to make it possible for physicians to do these things now, and still retain their standing as respectable medical men? If we do, abolish all codes. Under the old code it was deemed a violation of propriety for physicians to attract patients to their houses by offering to treat them gratuitously. If it is desirable to have this privilege again granted, why, abolish all codes. If it is right to bolster up physicians in carrying out all these practices, abolish all codes and you may be sure that they will do it. It is for the profession to decide whether or not it is desirable to do this, and if it is desirable, all you have to do is to abolish the code, but if it is not desirable, let us lay the proper restrictions upon the profession in these respects. An objection raised by Dr. Roosa to the report is one with reference to the duties of physicians in consultation, and he says that every physician knows how to conduct a consultation. I am sure that when I had my first consultation I knew nothing as to the manner in which it should properly be conducted, and the Committee has simply endeavored to state that there should be some little regulation upon that subject, in order that the young man may know how to proceed, and in order that all may be equally protected in their rights with reference to the patient. Suppose a consultation is called, and the consulting physician arrives first, and he runs in, sees the patient, examines him, tells him that he has a very serious disease, and that unless a change in treatment is made he will not get well, and then goes out. You can readily see how much injury in that way might be done by one physician to another, and if you wish to give the opportunity for such conduct, why, abolish all codes, and you will see how often it will be done. What is proposed in the rules governing consultations as reported by the Committee is simply to tell phy-

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sicians how to manage these matters, and also how controversies with reference to difference of opinion concerning the patient should be restricted. Is it desirable to keep these in their proper place, or is it best to relegate them to some other tribunal? Abolish all codes and there will be no restriction in any direction whatever. Irregularities will doubtless appear in spite of all codes, but it is true that just as long as offences are committed, and are able to be committed, so long is it necessary to have the profession, as a body, point out what it thinks the behavior of the profession should be to each other, and use such measures as may be necessary to carry out its views. But if it does not lay down a rule where are we? We cannot say, obey the Golden Rule, because not every one interprets it the same. We cannot say, be charitable, because some will reply that charity begins at home. We cannot say take this form or that form of religion and be governed by it, because religious opinions in this country are not to be interfered with. But we can lay down what the rules should be which govern the relations of medical men to each other, and in that way enable not only ourselves to be fully informed upon them, but all the profession and public to know what our position is. If you adopt the substitute offered by Dr. Roosa you will sweep away all restriction. If we are not ready for that, then let us seriously consider whether the report presented by the Committee corresponds to the views of the majority of the profession. If there are objectionable sections in this report, strike them out or amend them, and when we get through and find out what is left, if that is sufficient, then let us adopt it.

Dr. F. R. STURGIS, of New York: Mr. President—I have listened to the remarks which have been made by members of the special committee with much interest. What I shall have to say chiefly relates to a new point in the subject, one which heretofore has not been considered. There is no question that in spite of the code we possess, more stringent than the one now proposed, numerous infractions and derelictions have existed and gone unpunished. We have found that there is nothing whatever except gentlemanly feelings and a gentlemanly sense of conduct which practically restrains any member from infringing the old code or breaking its provisions, nor do I see that the code presented by the Committee can

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do any more than the previous one. The point to be considered is, whether it is wise to have any restrictions. To a certain extent restrictions are right, but in order to have them of any effect a penalty for their violation must be attached, and few persons will hesitate to break a law unless they fear punishment. That is the practical amount of the question. A law which cannot enforce its own provisions falls into contempt and disuse, and certainly in this respect the code is no exception. The question narrows itself down to this. Can we exact a penalty for any infringement of these regulations? I do not think that the present code can make any penalty whatever for infringement of its rules. We are told that it is derogatory to the dignity and interests of the profession to do certain things; in which we all agree, but there is no penalty attached to the infraction of this rule, and the experience of every day proves the rule is practically a dead letter. I think that an unwritten law would be as much respected and would be more stringent than that which is already written, and were any person to violate the rules of propriety, for example with reference to public advertisements, private cards or handbills, or by inviting the attention of individuals affected with particular diseases or were he to act in a way which is discourteous and ungentlemanly, and contrary to the good sense of the profession, he would be tabooed and cut off from the society of all decent physicians. I think that the radical defect in the proposed code is that there is no penalty attached for infringement of its requirements, and practically it becomes one of those laws which are broken as fast as made, and broken none the less quickly because simplified from that we have had before.

Dr. J. S. MOSHER, of Albany: Mr. President—The question is whether we stand now where we should if we adopt the resolution for a written code. At the time when Medical Societies disciplined members for offences, and punished them for violations of their rules, a code was necessary in order that members might have something to protect themselves as well as to punish the violators. But that time has gone by. Members are no longer disciplined except by being removed from membership. Let me say, before going further, that this Committee deserve great credit for the able work which they have done in dealing with a most difficult question. But, now I

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would ask what is the penalty for the violation of the old code? If we wished to resort to public advertisements, private cards or handbills, advertise "no pay no cure," give out notice that we will treat the poor gratuitously, what has there been to hinder? Possibly all these things may be done if we abolish this code, but I would ask how is it that the code which is proposed by the Committee, can prevent people from doing these very things? It is binding upon none except upon members of the Society, and these things are being done before our face every day, and in order to avoid the penalty all that is necessary to do is to omit payment of dues to the County Medical Society, or get some friend to prevent your membership in this Society, and we all know how difficult it is to keep out of this body, and you are in a position in which you can not be reached. It seems to me that we are endeavoring to make a code which is presumably for gentlemen, but it applies only to those who are not gentlemen, and do not wish to be members of our Society, and therefore cannot be reached by any penalty which we may wish to inflict. All that it is necessary for them to do if they are members of the Society, in order to avoid penalties, is to withdraw from the Society and thus escape. If so, the code can be made only to restrain us who wish to be gentlemanly and remain in good standing in our Societies, and if that be true do we need it? On the second page of the report of this Committee we find certain rules governing consultations. In reading this over we may be led to ask in what is it better to adopt these rules regulating the consultations than it is to abolish the entire code. It has been already stated that the two methods are practically the same thing. Look where we stand if we adopt this rule which is presented to us. Certain consultations are said to be improper by the American Medical Association and matters of discipline, and those principles have been carried so far as even to enter and divide families, so strictly has the rule been enforced. Now, we propose to change all this, and the statement is that all physicians may meet in consultation "legally qualified practitioners." We propose to say that the rule permitting such consultations should exist, but would it not be better to abolish the rule?

Dr. FRAZIER, of Camden: Mr. President—I have not previously spoken upon the subject, but only upon the manner of

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getting at it, and in getting at the subject I simply wish to have it done fairly and to have all the propositions before us. In order to do that I desired to have every proposition presented in order that it might have due consideration, and when I have apparently voted, first upon one side and then upon the other, it was because I wished not to be tied up in any way without discussion, and that while one proposition was being discussed the other might have an opportunity to slip through and be adopted in the meantime. Now, the proposition that instead of having the Code of Ethics we shall be required to be gentlemen, is a very broad and general one, because what is a gentleman in one neighborhood is not a gentleman in another. Although I respect the ability of that paper and the skill with which it is presented, still I can see something in the other article, something which is rather strong. I know there are upon that Committee men of experience, and who have had the opportunity to ascertain the opinion of certain neighborhoods. Now, in relation to Dr. Squire's remarks, he says it has not touched upon certain points which it should have touched upon; but if it touches upon so many points that are good let us speak well of them. Now, when we say in relation to the members of the profession who attended the late President, that the country desired to know his condition and felt a great anxiety that the doctors should report the temperature and pulse, and so on, and that we should give all these things for the satisfaction of the public, I can not see that that is an argument at all against this article which the Committee has reported. I do not think that it is applicable to the case. Now, with relation to this point which seems to be complained of the most, the action of the American Medical Association in consequence of our more liberal position with reference to consultation. I think that there are two extremes presented here upon that point, and what I believe we should do is to go between them both. Now, upon the one hand the laws of this State say that certain men are physicians, and make them so by law, and here we have simply an effort made to make our laws comply with those of the State of New York. By not doing so we give to other physicians who do not belong to our school a very great advantage in permitting them to say in different neighborhoods, "we are practicing according to the laws of the State of New York,

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but these other men will not meet us in consultation according to the laws of the State under which we all practice." That has been the argument which they have used, and which makes them strong, and which makes us appear stubborn and weakens us. I have always been of opinion that we should be permitted to meet these men if the permission could be placed in proper language; that is, if we could be permitted to consult with them without making it obligatory that we should do so. I think there is a strong point in this, that the law announces the position of physicians in the State so that it would seem that we should consult with them. I do not like to, and I generally object to, as they are not honorable; and at the same time their laws claim that they are gentlemen. I have one point to object to in this report of the Committee, and it is this: the Committee have made provision that when certain things occur a medical man may temporarily withdraw from his patients and request some of his professional friends to officiate for him and at the same time he receives the fees. Now, I think that that should be fixed in some way so that a man can not avail himself of it when he is off fishing or hunting. [Laughter.] And there is another thing which some of them may be disposed to do. Suppose, for example, a man is called up some dark, stormy night, and he says he can not go, is sick, and he sends them off for some one of his professional brothers to go for him, and he goes, and the doctor who pretends to be sick gets the pay. [Laughter.] I do not say that this thing ever would be done, but it permits such sharp practice as that even. I think that the physician who does the work should get the pay, [Laughter,] and that is about the only objection I have to this whole report, and I would suggest that it be amended in some way to cover that point, for I believe that the man who does the work should have the pay. I thank you, Mr. President and gentlemen for hearing me so kindly.

Dr. J. S. WIGHT, of Brooklyn: Mr. President—I desire to direct the attention of the Society to a matter of material importance, because it is a question of law. I find upon reading here in the first paragraph of the second part of the report of the Committee to Revise the Code of Ethics, the 30th line, a material error has crept in, without intention no doubt: but yet so far as I can judge a material error. And if this report

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is adopted as it now stands it may, on the point in question, convey a meaning different from that intended by the Committee. The line reads "May meet in consultation legally qualified practitioners of medicine." Now the laws of the State of New York are explicit on this point: In the report of the Committee, practitioner takes the place of Doctor. And the law states that we are Doctors of Medicine. And the law also provides for Doctors of Homœopathic Medicine, and for Doctors of Eclectic Medicine. To be sure these last are qualified Eclectics and Homœopaths—but indeed, they are not legally qualified doctors of medicine. And so the report does not clearly and actually make and recommend the change intended by the Committee. I think it was the intention to remove all barriers to consultation—and if this was so, it would have been better to have said so in words that could have but one meaning. It is further said "emergencies may occur in which all restrictions should, in the judgment of the practitioner yield to the demands of humanity." According to this we may consult with any one in any special line, in or out of the profession. Why not then abandon the code of ethics altogether and put professional conduct on the honor and dignity of a gentleman and a physician—when it may be conceded that a code of ethics is needed for those who need such a thing, and that a code is not required by honorable men? If any change is to be made, I am in favor of the substitute.

Dr. H. G. PIFFARD, of New York: Mr. President—I wish simply to correct an error which the gentleman seems to be laboring under. He states that Homœopathic practitioners are not Doctors of Medicine, but Doctors of Homœopathic Medicine: Now, the first Homœopathic college which was chartered, and entitled to grant any degrees in this State, was incorporated about 1857, and was authorized by its charter to grant the degree of "Doctor of Homœopathic Medicine," but after a few years the charter was changed, and the college was authorized to grant the same degree as other colleges, that is the degree of "Doctor of Medicine" without qualification.

Dr. E. R. SQUIBB, of Brooklyn: Mr. President—I wish simply to ask a single question. It is this: Why, if we open our doors so widely with reference to consultations, we do not show equal liberality with regard to other parts of the

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code of ethics, for example, that proscribing certificates to nostrums, proprietary medicines, patented articles of food, &c.? To be liberal in one and not liberal in another is not exactly in harmony. If the medical profession is to open its doors entirely with regard to association with all other sects of medicine the same liberality should be extended to members with reference to certificates of medicines, foods, health-resorts, &c. I think Dr. Roosa's substitute is more harmonious in itself than is the other report in this respect. If this report of the Committee is adopted it will no more stop advertisements and the appending of names of physicians to certificates than it will stop consultations. My question is this: Why does the Committee show liberality in one regard and rather stick to the old code in the other?

Dr. C. R. AGNEW, of New York: Mr. President—I would ask the Secretary to read the resolution under which the special Committee was organized. That Committee, it will be seen, was appointed to prepare a revision of the Code of Ethics, and I think it would have been plainly outside of its function if it had ventured to recommend to abolish the code. I have watched with interest, the movements of my colleague upon my right (Dr. Roosa) in offering his substitute. As a matter of taste and feeling, I lean in the direction of the proposition he makes. But I do not suppose that many persons upon this floor, or that the members of this Society generally, live in terror of the law, as he depicts them, under the Code of Ethics. Laws must exist, and they are only a terror to evil doers. We cannot sweep them away with safety either in the State or in this Society. I do not think that there are many men in our profession for whom we need legislate to produce a code to be held over them. The question is, however, is the profession, is the State Society prepared for the agitation which would result if by one fell stroke we were to remove entirely the Code of Ethics which has grown in the process of years to be the rule of our guidance? Are we prepared to say that our professional forefathers were all wrong in making the code under which we have lived? Is it not wiser to study it with reference to the conditions under which that code was framed, and to make such amendments as embody the present culture of our profession? Would it not be better to accept the report of the Committee, modify

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it as you may see fit, and adopt it, or refer it back for new revision? I personally might like to abolish many laws as not essential to my peace or safety; but there are young men coming forward in our profession constantly who wish to inquire what are the usages of the profession in regard to consultations for example, and with regard to many other things in their professional life and its relations to the public, and the question is whether the entire profession is prepared to do away with a code, or with all rules or regulations whatever. We stand as a profession in this State in such a prominent position that we affect the peace and welfare of the fraternity all over the United States, and we should take into account the possible ultimate reach of all our actions, before we resort to any such extraordinary measures as the substitute proposes. I shall, however, bow to the sense of this Society if it sees fit to adopt the sweeping substitute of my honored collague.

Dr. H. D. NOYES, of New York: Mr. President—I have held myself in the back-ground, hoping that some further light might be shed upon the entire subject brought before us, particularly upon its historical aspects. I have been looking for something which would explain to me what it was that gave rise to this system of rules which we know under the name of the Code of Ethics, but I have not heard whence it came. It seems to me it must have had a beginning in controversies and animosities, and peculiar conditions which have to a large extent, or perhaps entirely, been abolished. The present status of the medical profession is one in which there is a high sense of personal dignity, and feelings of propriety among its members in their relations to the public and to each other. At the same time we all know that a considerable class of men, both those who are called regulars and those who are irregulars, are prone to do things improper and unworthy of gentlemen. Now, the code of ethics, as it stands, is doubtless intended to meet the latter class of men, but I think that our influence in controlling them is absolutely nugatory. I do not believe that the old code of ethics has amounted to anything in the way of restrictions upon them. Every physician can call to mind instances of flagrant violation of both the spirit and the letter of the code, by men who have not been called to account. I do think that the temper and the spirit of the sub-

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stitute, offered by Dr. Roosa, is the temper and tone of such rules as are applicable to the present status of the medical profession. I well remember the feeling of surprise which came over me when the American Medical Association met in the city of New York in 1854, and I first read what is known as the Code of Medical Ethics. I never was more struck with astonishment than with that document. It seemed to be saying things which were both humiliating and unnecessary, even at that time. I am sure that the sense of this meeting is for the abolition of that code, as it now stands. I am not sure whether it is in favor of the report of the Committee or of the substitute offered by Dr. Roosa. But in taking a practical view of the matter the question is this: is it better for us to adopt the report of the Committee which perhaps puts us in an isolated position, or is it best for us to make a distinct declaration of opinion upon the subject by the adoption of the substitute offered by Dr. Roosa, and enforce that by our presentation of the subject before the American Medical Association? If we adopt the report of the Committee, we consent to perpetuate the conditions which that report implies, we keep ourselves under leading strings and under the necessity of distinct regulations for governing our conduct, at which every man with honorable feelings must be indignant. It does not require a code of ethics to tell any man how to treat his brother practitioner. My feeling throughout my professional life has been, first, to study what my duty is to humanity, and, second, to consider what my duty is to the profession. It has been with me a strong desire, and continues now, to see wherein professional honor and propriety can be sustained, and in deciding with reference to consultations, I must say that I have uniformly refused to consult with so-called irregulars. At the same time I have done so under the feeling that I was entitled to protest against it. I shall vote in favor of the substitute.

Dr. WILLIAM C. WEY, of Elmira: Mr. President—It seems to me that the question is, shall we continue the old Code of the American Medical Association, and the System of Ethics of this State, or adopt this report as offered by the Committee, or shall we adopt the substitute as proposed by Dr. Roosa? For my own part I have but little regard for the Code of Ethics, and little respect for the benefit which it has conferred upon the profession, but so long as there is a written law or laws we

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must abide by them. If we abdicate the code entirely are we prepared to say that the profession in this State is ready for it? It seems to me that the discussion should be limited as to what our action should be in this direction. For one I would say let us pursue a medium course. The Committee have removed certain objections from the old code, and have recognized that it is binding upon the members of the profession to adopt certain rules for their conduct, not only with regard to the relations which they sustain to their brethren, but with regard to the public. Now, it seems to me that some positive written law must be the guide of the profession. We have not reached that condition of excellence or perfection which permits us to leave it to every one to do unto his neighbor as he would that his neighbor should do unto him. Some written code is necessary to regulate the conduct of men, and we must continue to adopt certain rules which restrain medical men in their conduct toward each other and toward the public. It is very humiliating to know that any written laws are necessary for the regulation of their conduct, either to their professional brethren or to the public, but so long as the necessity is apparent for their being made, it is our duty to adapt them to the present exigencies of the time, and the Committee have proposed this middle course in such a manner as to acquire the confidence of the profession in this respect. The report yields nothing which the medical man should not yield to public opinion and the advancement of the age. It has been asked where does the power for discipline come in? It is said that it is the same as existed in the old code, and no more, but it must not be forgotten that under the old code the several County Societies in the State have been compelled to make by-laws which discipline members, and there are grades of punishment, such as admonition, suspension and expulsion. Now, under this new proposition, punishment can be administered the same as under the old, but, when reference is made to the unwritten law, no punishment whatever can be inflicted. Let us, in the interests of humanity and harmony adopt a system which contains so many excellent features and keeps us all within the letter of the law.

Dr. JOHN P. GRAY, of Utica: Mr. President—I do not rise to discuss this question, but I should be unwilling to be silent with reference to the single point as to whether we should

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shut off all rules and regulations, and leave the medical profession with all its members simply to their personal judgment. There is no organization which can live without rules. It is not attempted, and as Dr. Wey has properly suggested, that period of millennium has not arrived when we are to leave men to themselves in our profession, or to individual opinion with regard to their intercourse with each other and everything which relates to our guidance. The old code, however oppressive it may have seemed to be, has never done any of us any harm. No man has suffered under its guidance or protection more than any honest man suffers from laws which govern the community in which he lives. There should be law, there should be regulations for guiding every body, however that body may be organized. I do not propose to discuss the matter because I understand the only question before this Society is simply this, whether we shall adopt the declaration proposed by Dr. Roosa, to wipe away all regulations, leaving every man to his own personal judgment with regard to intercourse with his patients and his brethren of the profession in this State and every other State, with reference to consultations and with reference to the views of any particular professional brother still holding to the code in this State; whether we shall make this radical and revolutionary change. I hope it will not be done. I hope we shall not take any such radical and revolutionary step.

Dr. ROOSA, of New York: Mr. President—The time has gone by in the United States, when the cry against necessary reform that it is radical and revolutionary is to answer arguments presented in favor of it. Whether it be radical and revolutionary or not, if it be right, if it be the sentiment of the profession, they will sustain it as they sustained the first revolution which made us a nation. The arguments presented by the Committee in favor of its report, consist of a series of singularly contradictory statements. One member says there is no difference between our substitute and the report of the Committee. He says, no doubt the sentiments which actuated the substitute, are about the same as those which gave rise to their report. I do not agree with him fully upon that point. Their report is an admirably constructed plan for letting us down easily, and leaving us enough of law which can effectually govern us with regard to the matter of advertisements,

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etc. I have no doubt that the Committee look forward, and I thank them for their statement, to the adoption, in the future, of some such substitute as you have allowed me to present. It seems to be considered by some of the gentlemen, that the resolution which I have offered embraces no restriction upon medical men. That objection cannot be seriously made. It cannot be assumed that the statement "conduct unbecoming a physician and gentleman will not be allowed," makes no restriction upon the conduct of a human being. It makes the same kind of restriction as it made upon the officers of the United States army, a restriction which has tended to make that corps one of the best which has existed in any land, and so far as any restriction is required for the guidance and advance of the profession, I deny the claim as emphatically as I deny that the homœopath has assisted in the advance of the regular profession. The profession has advanced despite the codes, and it has advanced because in those counties where the medical society has done successful scientific work, it has shoved out of existence those petty quarrels which have had their foundation in this code. This unsymmetrical report reminds one of the old fashioned bed-quilt in its structure, a piece of the old and a piece of the new. But it is said, we must have a law touching consultations for the new practitioners; it has been assumed that the young man will not know how to behave when he reaches the consultation room unless he has rules. Is it possible that it is necessary, in order to tell the medical practitioner that he is guilty of conduct unbecoming the dignity of the profession, that a rule should be given, that he must be *regulated* by the medical profession of the State of New York, and has it been conceived by this Committee how we shall speak, or what remarks we shall offer, or what kind of a bow we shall make upon entering and leaving the room? No, Mr. President, that can not be a serious objection.

I am fully in sympathy with the remarks of my colleague upon my left, [Dr. Agnew], in which he states what is in his mind and in his heart, that we have outlived this Code, and I believe that it only remains for the State of New York to make a clean breast of it and go in for the advance which the sentiment of the profession seems to demand. I believe that he has spoken the honest sentiments of his noble heart, and I

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hope that his action will correspond with his word. I believe that the profession is in sympathy with the sentiment offered in this substitute, and not with the sentiment printed in this report, and now that we are assembled in numbers, perhaps as never before assembled, representing, perhaps as never was represented before, the medical profession of this State, representing as we do the medical profession of this country, we have a right to speak, and if we speak and say that it is our deliberate judgment that this Code has been outlived, and that a simple declaration of principles is all that is necessary, leaving it to the County Societies to carry out the details of discipline, let us fearlessly say so, and there is no fear as to what the consequences will be. If we believe down in our hearts that this substitute should be adopted, and for the sake of sentiment we vote it down, we shall be recreant to the trust reposed in us. I beg of you to vote in accordance with the sentiment and feelings of your hearts, and sustain the substitute which I have offered.

Dr. E. M. MOORE, of Rochester: Mr. President—I wish to move an amendment to Dr. Roosa's substitute, and upon that I wish to speak. My amendment is this, that we recommend the whole subject to the consideration of the American Medical Association, and offer to them the propositions we have before us. I think it would be unwise for us to dislocate ourselves in this sudden manner, as Dr. Roosa proposes to do, from the ethics of the American Medical Association. I have had the same wonder which Dr. Noyes has expressed as to where such a code as theirs could have come from, and I took pains at one time to investigate in that direction as to how we could have had such a wonderful composition. It was really copied almost verbatim from a treatise written by Dr. Samuel Percival in 1760, in accordance with the condition of society presented in England at that time, which was entirely aristocratic, governed by the law which regulates the relations existing between patron and client.

About seven or eight years ago, this subject came up in the American Medical Association. It began to be doubted whether it was all right. I received at that time a letter from Dr. N. S. Davis of Chicago, the father of the Association, to whom this matter had been referred, and I gave him my views upon the

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question, calling attention to the fact that Dr. Percival wrote the article over a century ago, and expressed the opinion that we had entirely outgrown such swaddling clothes. At the next meeting of the American Association the Committee brought in their report, and it was to the effect that the code of ethics of the American Medical Association was so excellent that it should be maintained. I do not think it is wise, just in the position in which we are now situated, to reach positive conclusions with reference to this question, but that these two propositions made here, had better be passed over to another year in order to give us time to think them over. It may be decided that it is proper to strike the code all out, or to construe it, as we have heretofore. I am willing to strike it all out and leave the regulation of our conduct to the unwritten law, for we have uniformly failed to apply the rules of discipline under any code or system of ethics by which we have been governed. We are organized under the laws of the State of New York, and the moment we undertake to discipline any offender, the laws of the State come in and aid the man, whom we attempt to discipline, in obtaining what he regards as his rights. For example, a man in the Genesee country, who is most notoriously a quack, known to be such in all of his region, was tried by the Medical Society of the County of Ontario, and was finally expelled, but he resorted to legal processes in his defense, finally dragged the Society into court, making not only expense for the County Society but gaining his cause. It is of no use, you cannot accomplish anything more, than we have been able to accomplish, in this way. You may have some form of discipline, you may make rules, but you had better leave these rules to the unwritten law. I therefore move that the code of ethics as reported by the Committee, and the substitute offered by Dr. Roosa, be reported to the American Medical Association for action and expression of opinion.

Dr. Piffard seconded Dr. Moore's motion, and stated that the report of the Committee agreed in all essential points with the Code of the American Medical Association, and had also incorporated one of the additional restrictions concerning consultations. He proposed to show that Dr. Moore's motion was unnecessary, inasmuch as the report gave no more liberality than did the American Code, especially with regard

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to consultations with Homœopaths. Dr. Piffard then quoted from the Code of the American Medical Association, "no one can be considered a regular practioner whose practice is based upon an exclusive dogma, and to the exclusion of such aids as are afforded by chemistry, anatomy, physiology, etc." Does that restriction apply to Homœopaths? Do they base their practice upon an exclusive dogma? If they do, do they do so to the rejection of aids offered by chemistry, anatomy, physiology etc.? Dr. Piffard then argued that Homœopaths do not base their practice upon an exclusive dogma, and proceeded to show that the American Code did not, as it stands, prohibit consultations with Homœopaths, and, therefore, if desirable to prohibit consultations with Homœopaths it was unnecessary to refer the subject to the American Medical Association.

The President remarked that the understanding and general interpretation of the clause in the American Code was that it applied to Homœopaths.

Dr. Seymour, of Troy, asked that Dr. Moore submit his resolution in writing, in order that the Society might know its exact scope and meaning.

Dr. Agnew of New York hoped that Dr. Moore's motion would not prevail. He felt pretty sure that a question of this kind should not be carried to the American Medical Association.

Dr. Elsberg of New York moved to lay Dr. Moore's motion upon the table. Carried.

Dr. Roosa then renewed the motion to accept his substitute for the report of the Committee.

Dr. Seymour moved to lay Dr. Roosa's motion upon the table. Lost.

The question being upon the acceptance of the substitute, the ayes and nays were called for by Dr. Piffard.

Several members desiring to vote, who had not yet had an opportunity to register their names, a recess was taken for a few minutes to enable them to do so, after which the ayes and nays were called from the official Register, with the following result: (Delegates in roman, Permanent members in italic.)

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AYES—Drs. Adams, *Beach*, Benedict, Birdsall, Bulkley, Carpenter, Colburn, Elsberg, *Ely*, Gerin, Gibney, Hasbrouck, *Hutchinson*, *James C. Hutchison*, Jacobus, *Jenkins*, Lee, *Little*, Lockrow, *Moore*, *Mosher*, *Noyes*, Pardee, *Pooley*, Potter, *Roosa*, Roe, Sell, Geo. Seymour, *Smith*, *Snow*, Starr, *Stoddard*, Sturgis, *Taylor*, *Vanderveer*, Ward, Whitbeck, Wright, Winter.—40.

NAYS—Drs. *Agnew*, Allen, *Ames*, *Ayers*, *W. H. Bailey*, Barnes, Chapin, *Chase*, *H. S. Crandall*, *Douglas*, *DuBois*, *Frazier*, Fox, *Govan*, *Gray*, *Greene*, Houghton, *Jacobi*, *Jewett*, Johnson, Kenyon, Lewis, *March*, *Piffard*, Phelps, Plant, Rogers, Seeber, *W. P. Seymour*, *Sherman*, *Spencer*, *Squibb*, *Squire*, *Stiles*, Suiter, *Vander Poel*, *Wey*, Willard—38.

The President ruled that inasmuch as the proposed substitute was in fact an amendment to the by-laws, it required a two-thirds vote in its favor, and was therefore lost.

Dr. Elsberg raised a point of order, that a two-thirds vote was not necessary, because the question was only upon the acceptance of the substitute for the report of the Committee, and not upon its adoption.

The President decided that the point of order was not well taken.

Dr. Hutchinson appealed from the decision of the chair.

The Society sustained the decision of the President.

Dr. Agnew renewed the motion that the substitute offered by Dr. Roosa, together with the report offered by the Committee, be referred to the American Medical Association, but subsequently withdrew his motion by leave of the Society.

Dr. Piffard moved the adoption of the report of the Committee, as a whole.

Dr. Squibb moved as an amendment that the subject matter of the report, the substitute, together with the discussion, be printed for distribution, and that the further consideration of the question be deferred until the next annual meeting.

Dr. Roosa opposed Dr. Squibb's motion, and hoped that the friends of the substitute would vote for the report of the Committee.

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Dr. SQUIBB: Mr. President—I wish to throw out a single suggestion which may help to solve the difficulties under which we labor. The principal change, besides a few verbal ones, which has been made in the old Code, is that which relates to consultations, and the clause is introduced into the report of the Committee giving permission to meet in consultation any legally qualified practitioner of medicine. The objections to this have been so numerous that they need not be recited, and the arguments on the other side have also been presented, and there is evidently a difference of opinion concerning the propriety of making this change. I therefore offer the suggestion that a safer conclusion can be reached if this matter be postponed until next year.

Dr. Agnew moved as an amendment to Dr. Squibb's amendment, that the report, together with Dr. Roosa's substitute, be re-committed to the Special Committee, and that Drs. Noyes, Roosa and Squibb, be added to the Committee, and that the Committee thus constituted be instructed to consider the matter and report at noon to-morrow.

Dr. Wey hoped that the matter would take the course suggested by Dr. Agnew. But if it was postponed for twelve months, the entire argument would have to be gone over again. It was a disagreeable question, and if it could be disposed of at the present meeting, the Society would do itself great credit, and also never have it come up again.

Dr. Agnew's substitute for Dr. Squibb's amendment was voted upon, and received ayes 32, nays 32. The President declared it lost.

Dr. Squibb's amendment was also lost.

The question was then taken upon Dr. Piffard's motion that the report of the Committee be adopted as a whole, by a rising vote. There were 52 ayes and 18 nays.

This being a majority of more than two thirds, the report of the Committee was declared substituted for the "System of Ethics."

The meeting then adjourned. at 11 h. 30 m. P. M.

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SECOND DAY—MORNING SESSION.

The Society met at 10 h. A. M. Both President and Vice-President being absent, Dr. W. C. Wey was called to the chair.

Prayer was offered by Rev. Wesley R. Davis, D. D.

Vice-President Govan, now took the chair.

The minutes of yesterday's meeting were read by the Secretary, and approved by the Society.

No communications were offered by County Medical Societies.

The Committee on By-Laws, made two reports as follows:—

I.

The Committee on By-Laws respectfully report that they have examined certain alterations and amendments of the By-Laws of the Medical Society of the County of Rockland, adopted by said society October 25th, 1881; the By-Laws of the Medical Society of the County of Greene, revised and adopted June 14, 1881; the By-Laws of the Medical Society of the County of Fulton, adopted January 12, 1882, and changes in the By-Laws of the Medical Society of the County of New York, adopted October 24, 1881, all of which are in accordance with the Laws of the State of New York, and the By-Laws of this Society, and they recommend the passage of the following resolution:

Resolved, That the alterations and amendments of the By-Laws of the Medical Societies of the Counties of Rockland, Greene, Fulton and New York, be, and the same are ratified and approved by this Society.

W. C. WEY,
C. E. WITBECK,
Committee.

February, 8, 1882.

The resolution was adopted.

II.

The Committee on By-Laws respectfully report that whereas by reason of statutory changes, the by-laws of not more than six county medical societies in the State of New York, to-wit: of the counties of New York, Broome, Chemung, Rockland, Greene and Fulton, are in accordance with the Laws of the State and the By-Laws of this Society, it is imperative upon the other county medical societies, some of which, for a great number of years, have disregarded the commands of the law in this particular, to be at once placed in harmony with the same, and the adoption of the following resolution is recommended:

Resolved, That before the next annual meeting of this Society, the several county medical societies whose by-laws have not recently been submitted to the Committee on By-Laws for approval, be directed to conform to the requirements of Chap-

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ter 8, Section 3, of the By-Laws, which declare, that the Committee elected for that purpose "shall examine the By-Laws of the County Medical Societies that shall be referred to them, and ascertain whether they are in accordance with the laws of this State and of this Society."

WM. C. WEY,
C. E. WITBECK,
Committee.

February 8, 1882.

This resolution was adopted by the Society.

Dr. Maurice Perkins, of Schenectady, offered the following:

Whereas, Often grave errors exist in the thermometers used by members of the profession in medical diagnosis, and it is desirable that these errors be conveniently corrected;

Resolved, That the President appoint a committee of members of the Society, which shall make some arrangement with the Director of the Dudley Observatory in Albany, by which thermometers may be corrected and verified as at the Winchester Observatory, at New Haven, Connecticut.

Dr. E. R. Squibb, of Brooklyn, said, Mr. President:—I am opposed to the resolution. If we multiply expensive bureaus for adjusting thermometers we defeat the entire object. The observatory at Yale College has already gone to a large expense in obtaining a set of standards, and the necessary apparatus for comparison, and if all the thermometers in this country could be sent there they would be abundantly able to do the work, and in that way get a little repayment for the money expended in starting this bureau. If we ask other observatories to establish these bureaus we shall duplicate the expense and divide the profit, if there be any, and there cannot be much, so that none will get paid for their labor. I am heartily in sympathy with the object of the resolution, but I see pretty clearly in my own mind, that it will defeat the very end we have in view, by tending to divide the profits rather than increase the benefits.

The resolution was lost.

Dr. Roosa, of New York, offered the following as an amendment to the By-laws:

Offences against the ethics of the profession, shall be comprehended under the commission of acts, unworthy of a physician and a gentleman.

This was at Dr. Roosa's request laid over for one year.

The Treasurer, Dr. C. H. Porter, of Albany then read his report, showing that the receipts for the year had been

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$2,539.51, and the disbursements $2,085.54, leaving a balance of $453.97. The report was referred to the Auditing Committee, consisting of Drs. Perkins, Beach and Piffard, who subsequently reported that they had "examined the accounts of the Treasurer, and found them correct."

Dr. Porter, as Trustee of the Merritt H. Cash Prize Fund, reported that there was available for prizes the sum of $127.12.

Dr. E. V. Stoddard made a verbal report for the Committee on Hygiene, stating that a report at length would be as usual submitted to the Committee of Publication.

Dr. John G. Curtis of New York read the report of the Committee on Experimental Medicine, which contained the following preamble and resolutions:

Whereas, There is reason to believe that, like its predecessors, the Legislature of 1882 will be asked to pass an act to forbid or restrict the performing of experiments upon animals for scientific purposes,

Whereas, The performing of such experiments by unqualified persons is already illegal, under section 10 of the act approved April 12, 1867; now, therefore, be it

Resolved, By The Medical Society of the State of New York:

First.—That it is the unanimous opinion of the members of this Society that the unrestricted performance, by qualified medical men, of scientific experiments upon animals is essential to the maintenance and progress of the science and art of medicine.

Second.—That, while this Society would thus set forth, to the Senators and Assemblymen in Legislature assembled, the views of the medical profession of the State upon this subject, it also calls their attention to the fact that, at the late International Congress in London, a resolution condemning the present interference with experimentation upon animals was adopted by more than three thousand official representatives of the medical profession of the world.

Third.—That, in the event of the introduction of any "anti-vivisection bill" into the Legislature of 1882, it shall be the duty of the Committee on Experimental Medicine to forward a certified copy of these resolutions, as a memorial from the Society to the Governor of the State of New York, and to each House of the Legislature thereof. Further be it

Resolved, That it is the duty of each member of this Society, before leaving Albany, personally to lay the views of the Society upon the so-called "anti-vivisection" agitation before the Senators and Assemblymen who represent him in the present Legislature.

The report of the Committee was accepted.

Dr. C. R. Agnew, of New York, offered the following:

Resolved, That the report be adopted, sent to the Committee of Publication, ordered to be printed immediately in separate

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form, and sent to the members of the Legislature and State officers.

The resolution was unanimously adopted.

Dr. E. R. Squibb, of Brooklyn, offered the following resolution, which was unanimously adopted:

Resolved, That the Treasurer is hereby authorized to set aside from moneys not otherwise appropriated the sum of one hundred dollars, and that the Committee on Experimental Medicine is hereby authorized to draw against the said sum, for their contingent expenses; any unexpended surplus of the said sum to be returned to the general fund of the Society at the end of the current fiscal year.

The Committee on Legislation, through their Chairman, Dr. A. Vanderveer, of Albany, reported as follows:—

Mr. President:—Such bills and amendments as have been brought to the attention of this Committee, and which have become laws, are already published in the volume of Transactions for 1881.

Your Committee have had referred to them the following bills [communicated by the Medical Society of the County of New York.]

AN ACT to amend Chapter 746 of the laws of 1872, entitled "An Act relating to the Examination of Candidates for the Degree of Doctor of Medicine."

(SECTION 1.) Section one, so that it will read as follows:

SECTION 1. The Regents of the University of the State of New York, shall appoint one or more boards of examiners in medicine, each board to consist of not less than seven members, who shall have been licensed to practice physic and surgery in this State; and all persons desiring to practice physic or surgery, after the passage of this act, must submit to the examination hereinafter prescribed, and obtain the diploma hereinafter provided, before entering upon the practice of physic or surgery in this State.

(SECTION 5.) Section five, so that it shall read as follows:

SECTION 5. Any person over twenty-one years of age, of good moral character, and paying not less than thirty-five dollars into the treasury of the University, and on applying to the Chancellor for the aforesaid examination, shall receive an order to that effect, addressed to the Board of Examiners; provided he shall adduce proofs satisfactory to the Chancellor, that he or she has a competent knowledge of all the branches of learning taught in the common schools of this State, and that he has diligently studied medicine, not less than three years under the direction of one or more physicians duly qualified to practice medicine, or has himself or herself been licensed, on examination, by some medical society or college legally empowered to issue licenses or degrees in medicine.

AN ACT to regulate the Licensing of physicians and surgeons.

The People of the State of New York, represented in the Senate and Assembly do enact as follows:

SECTION 1. No person shall practice physic or surgery, within this State unless he is twenty-one years of age and has been heretofore legally authorized and duly qualified so to do, pursuant to the provisions of chapter 518 of the laws of 1880, and chapter 186 of the laws of 1881, or shall be hereafter authorized so to do by the subsequent sections of this act.

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SECTION 2. Every person who has not heretofore been legally authorized and duly qualified to practice physic or surgery as aforesaid, shall, before practicing physic or surgery within this State, be examined as prescribed in chapter 746 of the laws of 1872, and chapter 579 of the laws of 1881, and comply with the subsequent provisions of this act.

SECTION 3. To entitle any person to practice physic and surgery within this State, excepting such as have heretofore lawfully registered, in pursuance of the provisions of chapter 513 of the laws of 1880, and chapter 186 of the laws of 1881, he or she shall, and every person hereafter complying with section 2 of this act, shall, before commencing to practice physic and surgery, register in the clerk's office of the county where he or she intends to practice physic and surgery, in a book to be kept by said clerk, his or her name, residence and place of birth, together with the date of the diploma, as conferred by the Regents of the University of the State of New York, and shall subscribe and verify by oath, or affirmation, before a person duly qualified to administer oaths under the laws of the State, an affidavit containing a plain statement of all such facts as aforesaid, together with the name of the degree conferred by said diploma, and the fact that he or she is over twenty-one years of age, and the county clerk shall receive a fee of twenty-five cents for such registration, to be paid by the person so registering.

SECTION 4. A person who shall willfully swear falsely to any statement contained in the affidavit required by section three of this act, shall be deemed to be guilty of and subject to conviction and punishment for perjury; and a person who violates any of the other provisions of this act, or who shall practice physic or surgery under cover of a diploma illegally obtained, shall be deemed to be guilty of a misdemeanor, and on conviction thereof, shall be punished by a fine of not less than $250 nor more than $500, for the first offense, and for each subsequent offense by a fine as aforesaid and by imprisonment for not less than thirty days, nor more than six months. The fine, when collected, shall be paid, the one-half to the person or corporation making the complaint, the other half into the county treasury.

SECTION 5. For the purposes of this act the words "practice physic and surgery," shall mean to prefix to one's name the word "Doctor," or the abbreviation, "Dr.," or to annex the letters "M. D." thereto, or to suggest, recommend, prescribe, employ, use or direct for the use of any person, any drug, medicine, appliance, apparatus or other agency, whether material or immaterial, for the treatment, cure, relief or palliation of any real or supposed ailment or disease of the mind or body, or for the treatment, cure, or relief of any wound, fracture or other bodily injury or any bodily deformity.

SECTION 6. Nothing in this act contained shall apply to commissioned medical officers of the United States army or navy, or of the United States Marine Hospital Service, nor to the members of the house staff of any hospital during their term of service.

SECTION 7. So much of chapter 513 of the laws of 1880, chapter 186 of the laws of 1881, and all other acts and parts of acts as are inconsistent with the provisions of this act are hereby repealed.

They would recommend that these bills be held under advisement for another year, to enable the subject to be considered in all its bearings. They would also suggest that, in the election of the Committee on Legislation for the ensuing year, two of its members be taken from one locality, so that more frequent consultations of its members may be held.

A. VANDERVEER,
H. G. PIFFARD,
ALEX. HUTCHINS, } Committee.

On motion the report was accepted and referred to the Committee of Publication.

Dr. F. R. Sturgis moved that the report be discussed in open session. This, after some conversation was withdrawn

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and the following substituted by Dr. Sturgis. Moved, that the report be referred to the Committee of the Whole, and made the special order of business for 11 o'clock to-morrow morning. This motion was carried.

On motion of Dr. Roosa, it was directed that the bills read by the Committee on Legislation be printed and distributed to the members, previous to the hour fixed for their consideration in Committee of the Whole.

The Business Committee read by title: "Memorial of Dr. William S. Hoffman," communicated by the Medical Society of Cayuga County.

Biographical Sketch of "Dr. Lake I. Tefft," by Israel Parsons, M. D.

Dr. Daniel Lewis, of New York, read, "The Treatment of Scarlatina."

Dr. Lorenzo Hale, of Albany, an invited guest, read, "An Improved Dressing for Fractured Clavicle." This was by vote referred to the Committee of Publication.

Dr. Herman Knapp, of New York, read. "Croup of the Conjunctiva, with Remarks on Contagious Forms of Conjunctival Inflammation."

Dr. C. R. Agnew, of New York, read, "Communicable Eye Disease and some of its Relations to Blindness and Pauperism."

The two papers were discussed by Drs. Bull, Noyes, Roosa, Sherwell, Ely, Squibb, Piffard, Knapp and Agnew.

Dr. J. O. Roe, of Rochester, read "Internal Œsophagotomy." The paper was discussed by Drs. Post, Elsberg and Roe.

The Society then adjourned till after dinner.

SECOND DAY—AFTERNOON SESSION.

The Society met at 3 h. P. M. President Jacobi in the chair.

The reading of papers was continued.

Dr. Louis Elsberg, of New York, read, "The Laryngeal Muscles of the Voice, and the Laryngoscopic Images of their Paralyses."

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Dr. William Hailes, of Albany, an invited guest, read, with illustrations, a paper entitled: "Improved Methods in Laboratory Teaching, and Demonstrations in Histology." It was discussed by Dr. Hunt, of Brooklyn, and referred by vote of the Society to the Committee of Publication.

The Business Committee read by title: "Biographical Sketch of Dr. Seneca Beebee," by Frederick Hyde, M. D.

Dr. Austin Flint, of New York, read a paper, "On the Physical Diagnosis, by means of Percussion, and Exploration by Puncture, of Peritonitis with and without Perforation of the Alimentary Canal, and the Employment of Aspiration in cases of Perforating Peritonitis."

Dr. A. M. Phelps, of Chateaugay, read, "Treatment of Talipes Equino-varus by Open Incision and Fixed Extension."

Dr. George H. Fox, of New York, read a paper "On the Treatment of Wine-Marks by Electrolysis." Discussed by Drs. Sherwell, Knapp and Sherman.

Dr. A. Vanderveer, read, "Subcutaneous Section of the Femur." The paper was discussed by Drs. Ward and Peters.

Dr. H. D. Noyes, read, "Division of Optic and Ciliary Nerves for Sympathetic Ophthalmia." Discussed by Drs. Jewett, Knapp, Roosa, Howe and Noyes.

The Business Committee read by title: "Memoir of Dr. James P. White," by Austin Flint, M. D.

Dr. L. Duncan Bulkley, of New York, read, "The Malignity of Syphilis with an Analysis of Four Hundred and Fifty Cases."

The Society then adjourned till evening.

SECOND DAY—EVENING SESSION.

The Society met at 8 h. P. M., in the Assembly Chamber of the Capitol, Vice-President William Govan, occupying the chair.

President Jacobi, delivered the Anniversary Address, taking as his topic, "Infant Feeding and Infant Foods."

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At its close, on motion of Dr. S. O. VanderPoel, the thanks of the Society were tendered the President for his interesting and very instructive address.

The Society then adjourned, till morning.

THIRD DAY—FINAL SESSION.

The Society was called to order at 10 h. A. M., by the President.

Prayer was offered by Rev. James H. Ecob.

The reading of the minutes of yesterday's sessions, was dispensed with.

The Secretary presented a communication from the Otsego County Medical Society, as follows:

Resolved, That our delegates to the State Society, be instructed to use their influence to procure the rescinding of the vote of 1881, which requires permanent members to pay their annual dues, or suffer the penalty of being dropped from the roll of permanent members.

ONEONTA, N. Y., Jan. 20, 1882.

The above is a true copy of the original resolution as passed at the semi-annual meeting held at Otego, January 17, 1882. O. W. PECK, *Secretary*.

The communication was referred to the Committee on By-laws.

The Committee on the President's Inaugural Address, reported, the Chairman of the Business Committee reading the report.

The following resolutions, contained in the report were unanimously adopted.

Resolved, That this Society endorses, to the fullest extent, the sentiment expressed by the President in relation to the employment of children of tender age, or immature development, in factories and manufacturing establishments, and requests that the Committee on Legislation prepare a bill for passage by the Legislature which shall include the suggestions of the President.

Resolved, That, from the extreme contagiousness of scarlet fever and diphtheria, a contagiousness which is probably limited to a restricted area, and not conveyed to any distance atmospherically, this Society favors the absolute isolation of such cases of sickness, even in instances where every attainable luxury and comfort surrounds the patient, and expresses the urgent necessity for the erection of special hospitals for the care of patients sick with these diseases; and, further, that from the feeble dissemination of these poisons by the atmosphere, such hospitals may be erected with safety to others, even in thickly-settled parts of cities.

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Resolved, That with a view to the elevation of the standard of attainment of those entering the profession, and also the establishment of a uniform grade, as far as possible, the conferring of the title of Doctor of Medicine should be by Medical Colleges, only after the examination and recommendation of an independent board of examiners, which board shall be common to all the colleges.

The Secretary read the report of the Committee of Publication, which on motion was accepted.

The Committee to Co-operate with the Society for the Prevention of Cruelty to Children, reported progress, and was continued, the vacancy occasioned by the death of Dr. James P. White, being filled by the appointment of Dr. C. R. Agnew of New York.

Dr. Austin Flint, of New York, offered the following resolution, which was unanimously adopted:

WHEREAS, Efforts have been made in this country to excite, in the minds of ignorant people, a prejudice against vaccination,

Resolved, That the matter be referred to the Committee on Experimental Medicine, and that this Committee be empowered to take such measures as may seem to its members requisite for the protection of public health.

On motion Dr. Flint was added to the Committee on Experimental Medicine.

Dr. John P. Gray, of Utica, offered the following preamble and resolution, which were unanimously adopted:

In view of the important relations of the medical profession to the administration of justice, the time has arrived when this Society should declare its opinion upon the proper functions and limits of medical expert testimony. Therefore be it

Resolved, That the true functions of the medical expert is to expound and interpret the results of pathological conditions, and that in the absence of disease he is not justified in drawing conclusions, as to civil responsibility, from moral manifestations of conduct, that department belonging exclusively to law.

Upon resolution Dr. Gray was requested, and consented, to prepare and read a paper on the above subject at the annual meeting in 1883.

The Business Committee read by title the following papers:

"The Early Diagnosis of Pott's Disease," by Dr. V. P. Gibney of New York.

"The Significance of Pain Referred to the Ear," by Dr. D. B. St. John Roosa, of New York.

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"Cases of Glaucoma, in which Iridectomy on the Eye seemed to Precipitate an Attack of Acute Glaucoma in the Fellow Eye," by Dr. D. Webster, of New York.

"A Few Original Thoughts on Cholera," by Dr. H. Raymond Rogers, of Dunkirk.

"Facial Paralysis Occurring in Connection with Aural Disease," by Dr. S. Sexton, of New York.

"Inflammation of the Shoulder Joint, Resulting from Hemiplegia," by Dr. L. E. Felton, of Potsdam.

"Report of a Case of Molluscum Fibrosum," by Dr. George G. Hopkins, of Brooklyn.

Dr. E. R. Squibb, of Brooklyn, offered the following preamble and resolutions, which were unanimously adopted:

WHEREAS, The rule adopted in this annual meeting of limiting the time allowed for reading each paper to twenty minutes, has very materially facilitated the business of the sessions, and enabled the Society to avail itself of all the material offered; therefore, be it

Resolved, That it is recommended to readers of papers for future sessions of the Society either to limit the length of the paper to twenty minutes, or, when this cannot be done, to prepare an abstract which can be read within the prescribed time.

Resolved, That any motion to extend the prescribed time shall not be in order.

Dr. D. H. Goodwillie, of New York, an invited guest, then read a paper entitled: "Application by Insufflation of Medicated Powders to the Upper Air-Passages, for the Relief of Catarrhal Conditions."

Dr. Roosa referring to a statement in the paper that the powder-blower recommended, was that devised by Dr. Andrew H. Smith of New York, said that Dr. Ely, of Rochester invented a powder-blower identical with that of Dr. Smith's about sixteen years ago.

Dr. E. H. M. Sell, read a paper "On the Use of Avena Sativa."

Dr. E. R. Squibb, objected to the reception of the paper and its appearance in the Transactions, on the ground that it contained statements so broad and so extraordinary, that unless corroborated by the testimony of other trustworthy observers, the Society should not be responsible for its publication.

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The President ruled the objection out of order, on the ground that as Dr. Sell is a delegate and hence a member of the Society, his paper must according to the By-Laws, be referred to the Committee of Publication—who have discretionary power with regard to publishing it.*

The hour of eleven having arrived, the report of the Committee on Legislation was taken up. Dr. Wesley M. Carpenter, of New York, offered the following preamble and resolutions:

Whereas, The Medical Society of the County of New York, in its efforts to enforce the medical law passed May 29, 1880, has found that it is inefficient in certain respects relating to the conviction and punishment of illegal practitioners; and

Whereas, The belief is that an act can be so drawn as to promote the interests of the medical profession, secure the conviction and punishment of illegal practitioners, and effectually aid in the suppression of quackery; be it

Resolved, That The Medical Society of the State of New York sympathises with the movements of the Medical Society of the County of New York already made in its efforts to carry out the provisions of the medical law passed May 29, 1880, and also approves of the continued efforts of that society to secure the enactment of such amendments, or the passage of a new bill, as will aid in the conviction and punishment of illegal practititioners, and in the suppression of quackery.

Dr. SQUIBB: Mr. President—I rise to second the resolutions offered by Dr. Carpenter, and to support them, also for the purpose of offering opportunity for Dr. Sturgis, who, is familiar with the present and prospective law, to explain exactly what it is that he wishes to accomplish. As I understand it, there are two defects in the present law which he wishes to remedy. 1. That it is desirable to have a definition of what constitutes legal practitioners of medicine, and 2. That the present perjury clause has a defect which renders it inoperative in the direction desired. If now, Dr. Sturgis will state exactly what the state of affairs is, we shall be in a better condition to discuss the matter.

*Some correspondence was had soon after the annual meeting between Dr. Sell and the Secretary relative to his paper. The Secretary stated to Dr. Sell that unless a good working formula was given for the preparation of the Concentrated Tincture of Avena sativa, the said tincture clearly came under the head of secret nostrums, which the Society requires its members not to recommend. Messrs. Keith & Co., of New York, thereupon forwarded to the Secretary what purported to be the formula for making this tincture, but a most essential portion of the working process was omitted. Hence, as Dr. Sell had intimated that he should not send on his paper for publication unless a formal request was made for it, the Secretary concluded not to make the request.

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Dr. STURGIS: Mr. President—There are three things which these bills contemplate. 1. To make the examination for a license to practice physic and surgery by a State Board of examiners compulsory, in order to prevent irregular schools from selling diplomas which as the law now stands, can be used as licenses. 2. To define the qualifications of a legal practitioner, and 3. To so amend the perjury clause of the act of 1880, as to make it applicable to irregular practitioners. As the law now stands it can be made applicable to legally qualified practitioners only.

Furthermore, as the law now stands, the schools have the option to graduate men without qualification. If there were no other schools except those in good standing the necessity for a law would be obviated; but the proposed act holds graduates of irregular as well as regular schools, to the requirement of examination by a State Board, and overcomes one of the difficulties in attempting to enforce the law of 1880. In other words, it seems to be desirable to force the graduates of irregular schools to bring the same qualifications that we do. Each man should show that he is entitled to a license to practice physic and surgery.

Dr. SQUIBB: Will this bill meet with objections from the better schools.

Dr. STURGIS: That is a somewhat difficult question to answer. It is believed that it would not meet with opposition from any good school, and it seems quite certain that it will not perhaps, from most of them. At all events it cannot, reasonably, when the true object of the bill is made clear.

The resolutions were adopted.

Dr. Roosa moved that the new bill, with regard to licensing physicians, be recommitted to the Committee on Legislation, with instructions to amend or prepare a new bill defining what constitutes a legally qualified physician, and a license to practice medicine, and also to perfect a perjury clause and recommend that it become a law.

The President—Shall the bill be recommitted to the Committee on Legislation, directing and authorizing them to perfect it by the aid of legal counsel in the particulars mentioned?

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Dr. Roosa's motion was adopted.

The proposed amendments to chap. 746 of the laws of 1872, relating to the examination of candidates for a license to practice Physic and Surgery, were approved and recommitted to the Committee on Legislation, with instructions that they recommend that they become a law.

Some remarks having been made intimating that, owing to the homœopathic tendencies of some of the Regents of the University, an acceptable Board of Examiners might not be appointed by them, Dr. Perkins, of Schenectady, said that the Board of Regents consisted of well-informed men. The Chairman is a college-educated man, and the Secretary is a college-graduate and friendly to every advance in education. He thought the Committee could be wonderfully assisted in its labor by these gentlemen.

Dr. T. R. Pooley, of New York, then read the Report of the Committee of Nomination, as follows :—

The Committee of Nomination beg leave to submit the following nominations:

For President—Harvey Jewett, of Canandaigua.

For Vice-President—E. D. Ferguson, of Troy.

For Secretary—Wm. Manlius Smith, of Syracuse.

For Treasurer—Charles H. Porter, of Albany.

For Censors—Southern District: J. W. S. Gouley, C. R. Agnew, Austin Flint, all of New York. Eastern District: C. E. Nichols, M. H. Burton, W. S. Cooper, all of Troy. Middle District: Alonzo Churchill, S. G. Wolcott, J. K. Chamberlayne, all of Utica. Western District: C. C. Wyckoff, of Buffalo, Thomas F. Rochester, of Buffalo, Henry Lapp, of Clarence.

Committee of Arrangements—S. B. Ward, of Albany; F. C. Curtis, of Albany, J. S. Mosher, of Albany.

Committee on By-Laws—W. C. Wey, of Elmira; Alexander Hutchins, of Brooklyn; Wm. Manlius Smith, of Syracuse.

Committee on Hygiene—E. V. Stoddard, of Rochester; Stephen Smith, of New York; Jacob S. Mosher, of Albany; J. Foster Jenkins, of Yonkers; Caleb Green, of Homer; Edwin Hutchinson, of Utica; Theodore Dimon, of Auburn.

Committee on Legislation—Wm. H. Bailey, of Albany; Albert Vanderveer, of Albany; F. R. Sturgis, of New York.

Committee on Medical Ethics—C. R. Agnew, New York; E. M. Moore, Rochester; S. O. Vander Poel, New York.

Committee on Prize Essays—Thomas F. Rochester, of Buffalo; Wm. S. Ely, of Rochester; W. W. Potter, of Buffalo.

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Committee of Publication—Wm. Manlius Smith, of Syracuse; Charles H. Porter, of Albany; H. D. Didama, of Syracuse; J. Foster Jenkins, of Yonkers.

Censor for the College of Medicine, Syracuse University—John W. Whitbeck, of Rochester.

For Permanent Members—First District: G. H. Fox, New York; F. R. Sturgis, New York; Louis Elsberg, New York; John D. Rushmore, Brooklyn; F. W. Rockwell, Brooklyn. Second District: E. H. Loughran, Kingston; Samuel Swift, Yonkers. Third District: F. C. Curtis, Albany; W. S. Cooper, Troy. Fourth District: Lucius E. Felton, Potsdam; F. L. R. Chapin, Glens Falls. Fifth District: Wm. H. Johnson, Port Leyden; D. Pardee, Fulton. Sixth District: B. F. Smith, Mt. Upton. Seventh District: Joseph P. Creveling, Auburn. Eighth District: Thomas M. Johnson, Buffalo; J. O. Roe, Rochester.

For Honorary Members—Charles N. Hewitt, Red Wing, Minn.; Roberts Bartholow, Philadelphia, Pa.; Sidney Ringer, London, Eng.

Eligible to Honorary Membership—Theodore G. Wormley, Philadelphia, Pa.; Wm. Goodell, Philadelphia, Pa.

Delegates to State Medical Societies—Massachusetts: G. G. Monroe, Crary's Mills; E. N. Brush, Utica; P. V. S. Pruyn, Kinderhook. New Hampshire: W. M. Chamberlain, New York. New Jersey: N. C. Husted, Tarrytown; William Govan, Stony Point. Ohio: Thomas R. Pooley, New York. Pennsylvania: H. C. May, Corning; Sol. Van Etten, Port Jervis. Vermont: Lyman Barton, Willsborough; A. M. Phelps, Chateaugay.

Delegates to the Canadian Medical Association—John Gerin, Auburn; D. V. O'Leary, Albany; L. E. Felton, Potsdam; L. C. Dodge, Rouse's Point.

Delegates to the American Medical Association—C. R. Agnew, New York; Wm. H. Bailey, Albany; Fordyce Barker, New York; L. S. Bulkley, New York; Wm. M. Chamberlain, New York; J. H. Chittenden, Binghamton; Theodore Dimon, Auburn; Wm. S. Ely, Rochester; G. J. Fisher, Sing Sing; J. P. Gray, Utica; F. H. Hamilton, New York; E. S. Howe, Black Brook; N. C. Husted, Tarrytown; Joseph C. Hutchison, Brooklyn; Frederick Hyde, Cortland; A. Jacobi, New York; J. Foster Jenkins, Yonkers; Harvey Jewett, Canandaigua; A. V. B. Lockrow, New York; E. M. Moore, Rochester; Maurice Perkins, Schenectady; H. G. Piffard, New York; T. B. Reynolds, Saratoga Springs; Thomas F. Rochester, Buffalo; D. B. St. John Roosa; New York; L. A. Sayre, New York; H. G. P. Spencer, Watertown; E. R. Squibb, Brooklyn; F. R. Sturgis, New York; S. O. Vander Poel, New York; Wm. C. Wey, Elmira.

Dr. F. C. Curtis said it was desirable that one of the members of the Committee of Arrangements should be taken from some other portion of the State than Albany, and moved to substitute the name of W. S. Ely, of Rochester, for his own. The motion was carried.

Dr. Lewis A. Sayre, of New York, moved that the Secretary be directed to cast in behalf of the Society an affirmative ballot, for the report of the Committee, as amended. The motion was carried, and the ballot cast as directed, whereupon the several nominees were declared elected.

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Dr. J. P. Gray moved a vote of thanks to the Committee of Arrangements for the efficient manner in which they had discharged their duties at this meeting of the Society. The motion was carried.

Dr. Sturgis offered the following, which was adopted:

Resolved, That the Censors of each county medical society be requested to report to the Committee on Legislation, [with regard to the working of the laws regulating the practice of medicine], on or before the fifth day of January of each year.

The Business Committee announced that there was no further business, and recommended that the Society adjourn.

The President thanked the members for the uniform kindness and courtesy which he had received at their hands, and declared the Society adjourned, to meet in the City of Albany, on the first Tuesday in February, 1883.

WM. MANLIUS SMITH, Secretary.

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REPORTS.

1. Report of the Treasurer, Charles H. Porter, M. D., of Albany.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, IN ACCOUNT WITH THE TREASURER.

General Fund.

Received from County Medical Societies, Institutions and Individuals, as Follows:

Albany County Medical Society,			1881	$ 20 00
Allegany	"	"	1881	5 00
Broome	"	"	1881	5 00
Cattaraugus	"	"	1881	10 00
Cayuga	"	"	1881	10 00
Chautauqua	"	"	1880, '81	20 00
Chemung	"	"	1881	5 00
Chenango	"	"	1881	5 00
Clinton	"	"	1881	5 00
Columbia	"	"	1881	5 00
Cortland	"	"	1881	5 00
Delaware	"	"	1881	10 00
Dutchess	"	"	1881	10 00
Erie	"	"	1881	25 00
Essex	"	"	1881	5 00
Franklin	"	"	1881	5 00
Fulton	"	"	1881	5 00
Genesee	"	"	1881	5 00
Greene	"	"	1881	5 00
Herkimer	"	"	1881	5 00
Jefferson	"	"	1881	10 00
Kings	"	"	1881, '82	120 00
Lewis	"	"	1881	5 00
Livingston	"	"	1881	5 00
Madison	"	"	1881	10 00
Monroe	"	"	1881	15 00
Montgomery	"	"	1881	5 00

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New York Co. Medical Society,			1882	$120 00
Niagara	"	"	1881	10 00
Oneida	"	"	1882	15 00
Onondaga	"	"	1881	15 00
Ontario	"	"	1881	5 00
Orange	"	"	1881	10 00
Orleans	"	"	1881	5 00
Oswego	"	"	1882	10 00
Otsego	"	"	1881	10 00
Putnam	"	"	1881	5 00
Queens	"	"	1881	10 00
Rensselaer	"	"	1881	15 00
Richmond	"	"	1881	5 00
Rockland	"	"	1881	5 00
St. Lawrence	"	"	1881	15 00
Saratoga	"	"	1881	10 00
Schenectady	"	"	1881	5 00
Schoharie	"	"	1881	5 00
Seneca	"	"	1881	5 00
Steuben	"	"	1881	10 00
Suffolk	"	"	1881	5 00
Sullivan	"	"	1881	5 00
Tioga	"	"	1881	5 00
Tompkins	"	"	1881	5 00
Ulster	"	"	1881	15 00
Warren	"	"	1881	5 00
Washington	"	"	1881	10 00
Wayne	"	"	1881	10 00
Westchester	"	"	1882	15 00
Wyoming	"	"	1881	5 00
Albany Medical College, 1881				5 00
College Physicians and Surgeons, New York, 1881				5 00
Medical College, Syracuse University, 1881				5 00
Initiation Fee as Permanent Members from Drs. D. V. O'Leary, Geo. C Smith, Geo. Abbott, F. A. Castle, T. R. Pooley, P. M. Wise, S. H. Peck, William H. Dudley, John C. Dalton, Smith Ely, C. E. Witbeck, Henry Lapp, Wm. Chace, C. E. Nichols, J. C. Peters, E. F. Edgerly, Henry Gray, C. C. P. Clark and N. H. Freeland,—19				95 00
Received from Permanent Members, annual dues:				
1 for 1875				2 00
2 for 1876				4 00
2 for 1877				4 00
3 for 1878				6 00
5 for 1879				10 00
14 for 1880				28 00
136 for 1881				680 00
4 for 1882				20 00
				$1,574 00
To balance as shown by Treasurer's report, February 1, 1881				$606 81
Total				$2,180 81

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PUBLICATION FUND.

RECEIVED FOR TRANSACTIONS OF THE SOCIETY AS FOLLOWS:

1 volume of 1870	$ 1 00
1 volume of 1877	1 50
6 volumes of 1878	7 00
10 volumes of 1879	15 00
78 volumes 1880	109 20
475 volumes 1881	475 00
Total	$ 608 70

THE EXPENDITURES FOR AND ON ACCOUNT OF THE SOCIETY, FROM FEB. 1, 1881 TO FEB. 7, 1882, WERE AS FOLLOWS:

Dr. W. M. Smith, services as secretary	$ 450 00
Dr. W. M. Smith, stationery, postage, &c	25 98
Dr. W. M. Smith, expenses of publication Committee	184 90
Dr. C. H. Porter, services as treasurer	150 00
Truair, Smith & Bruce, printing Transactions, &c	500 00
Truair, Smith & Bruce, printing Transactions, &c	300 00
Truair, Smith & Bruce, printing Transactions, &c	230 79
Phœnix Insurance on Transactions	31 50
Wallace Blair, stenographer	75 00
Dr. W. M. Smith, expenses incurred in attending the Convention of 1880, for revising the Pharmacopœia	33 22
W. M. Stetson, stationery, &c	5 30
J. Jones, carting Transactions from N. Y. C. & H. R. R. R. Ft. house	2 00
E. Labishiner, services as janitor	20 00
P. Hertz, use of chairs, &c	12 00
Lord & Lord, legal services in preparing bill for Legislature	25 00
Robert Campbell, copying laws of State	5 28
Chas. F. O'Neill, services as page	5 00
Argus Co., printing, &c	37 00
Argus Co., advertising meeting	3 50
N. Y. C. & H. R. R. R. feight on Transactions	3 12
N. Y. C. & H. R. R. R. freight on Transactions	45
N. Y. C. & H. R. R. R. freight on Transactions	2 70
Chas. H. Porter, expressage on Transactions	6 98
Chas. H. Porter, postage, envelopes, &c	25 87
Total	$2085 54

RECAPITULATION.

Total receipts, general and publication funds	$2,789 51
Total disbursements	2,085 54
Balance in Treasury	703 97
Of which $250 is dues for 1882, paid in advance by county societies and permanent members, leaving actual balance for the year	453 97

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SOCIETIES AND INSTITUTIONS IN ARREARS WITH THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, FOR ANNUAL DUES, FEB. 7, 1882.

Schuyler County Medical Society, 1880 and '81	10 00
Yates County Medical Society, 1880 and '81	10 00
Medical dep't, University of New York, 1881	5 00
Medical dep't, University of Buffalo, 1881	5 00
Bellevue Hospital Medical College, 1881	5 00
Long Island College Hospital	5 00
New York Academy of Medicine, 1881	25 00
Total	65 00

APPENDIX TO TREASURER'S REPORT.

TABLE I.

VOLUMES SOLD.	TRANSACTIONS OF							
	1873–4	1875	1876	1877	1878	1879	1880	1881
1874	1,116							
1875	40	858						
1876	5	14	328					
1877	6	6	73	1				
1878	16	30	163	662	487			
1879	6	7	8	10	121	306		
1880		1	4	4	58	205	485	
1881				1	6	10	78	475
Transactions sold	1,189	916	576	678	672	521	563	475
Del'd to per. members.			242	258	326	206	255	209
Total sold and delivered.	1,189	916	818	936	998	727	818	784
On hand	440	655	600	190	196	215	237	256
Edition published*	1,800	1,800	1,500	1,200	1,200	1,200	1,200	1,200

* The discrepancy between the last line of this table, and the sums of the two lines just before the last, is partly due to the fact that no account is here made of the volumes sent to other State Societies, &c., and partly, that some of the volumes, of the later issues, are in the Secretary's hands, at Syracuse.—[W. M. S.]

TABLE II.

DERIVED FROM SALES OF TRANSACTIONS IN	FOR TRANSACTIONS OF							
	1873–4	1875	1876	1877	1878	1879	1880	1881
1874	1,902 50							
1875	60 00	1,315 05						
1876	7 50	21 70	492 00					
1877	9 00	9 00	109 50	1 35				
1878	22 00	46 90	244 50	893 70	535 70			
1879	3 00	5 60	12 00	18 15	133 10	504 90		
1880		1 50	6 00	6 00	52 80	333 75	680 00	
1881				1 50	7 00	15 00	109 20	475 00
Total sales	2,004 00	1,399 35	864 00	915 70	728 60	853 65	789 20	475 00
From dues, per. members.		2 00	564 00	516 00	652 00	412 00	510 00	1,045 00
Total receipts.	2,004 00	1,401 35	1,428 00	1,431 70	1,380 60	1,265 65	1,299 20	1,520 00
Expenses of edition	2,012 63	2,366 25	1,684 19	1,456 81	1,179 86	1,797 56	1,718 29	1,200 00
Balance, debit		964 90	256 19	21 61				300 00
Balance, credit	8 63				200 74	531 91	419 09	
Price of volumes	1 50 50	1 55 50	1 50	1 35	1 10	1 65	1 40	1 00

Total expenses	$13,415.09
Total receipts	11,730.50
Debit balance	$ 1,684.59

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TABLE III.

PAID IN	PERMANENT MEMBERS PAID DUES FOR						
	1876	1877	1878	1879	1880	1881	1882
1876	147						
1877	56	187					
1878	28	53	237	13			
1879	9	14	82	165	4		
1880		2	4	23	237	73	
1881	2	2	3	5	14	136	4
Total	242	258	326	206	255	209	4

TABLE IV.

The following County Medical Societies have taken their quota of the Transactions of 1881:

Allegany	18	New York	120
Broome	7	Oneida	15
Cayuga	10	Ontario	17
Chenango	5	Oswego	10
Cortland	5	Putnam	6
Franklin	5	Rensselaer	15
Fulton	5	St. Lawrence	15
Genesee	5	Schenectady	7
Greene	5	Schoharie	5
Herkimer	5	Suffolk	6
Jefferson	10	(Ulster	15)
Kings	60	Wayne	20
Livingston	10	Westchester	15
Montgomery	10	Tompkins	5*
Total			431

2. REPORT ON THE MERRITT H. CASH PRIZE FUND.

By resolution of the Society adopted at the Annual Meeting of 1876, the Treasurer caused (Oct. 1st, 1877,) the Merritt H. Cash Prize Fund—$500.00—on deposit at the Albany Savings Bank, to be transferred to him as Treasurer of the Society and Trustee of the Fund.

Accrued interest to Jan. 1st, 1881 ..... $104 26
" " from Jan 1st, 1881, to Jan. 1st, 1882 ..... 22 86

Total sum available for Prize $127 12

Respectfully submitted,

CHARLES N. PORTER,

Trustee of Merritt H. Cash Fund.

* Monroe, Onondaga and Otsego counties, took their quotas, amounting to 40 copies, of the Secretary just before the Annual Meeting.—[W. M. S.]

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3. REPORT OF COMMITTEE OF PUBLICATION.

The Committee of Publication respectfully report, that, as directed by the By-Laws, they invited the competition of two respectable publishing houses in Syracuse, viz: the Standard Publishing Company, which printed the Transactions of 1880, and Truair, Smith & Bruce, who published the volume for 1879. The bids sent in by these houses were very much the same. The first named company had the advantage of newer type, and the last named the advantage of a complete bindery of their own. As there had been great trouble in 1880 in having the binding done promptly, it was deemed desirable to have the work done by Truair, Smith & Bruce. Accordingly, this firm were told, that on condition of their buying a new font of small pica type the printing should be allotted to them. After some delay they concluded to accept the proposition, and ordered the type. Some time elapsed before their order was filled—and by the time the type arrived, the firm had determined to remodel their printing rooms. Some weeks were spent in this, so that the actual work of printing did not commence till near the month of June, and the issue of the volume was correspondingly delayed.

The cost of Transactions proper, was $988.79 for 1,200 copies, or not quite 85 cents a volume. The Committee therefore in accordance with the By-Laws fixed the price at $1.00 a copy. Probably owing to the lateness of the issue, fewer County Societies have taken their quota than had done so at the corresponding Session last year. A few Societies have the past year, purchased their quotas for previous years, and others have made inquiries which indicates a purpose to comply with this requirement of the Society's by-laws. Two prominent Societies, one at either end of the State, have thus far, neglected to secure their quotas of Transactions for the last three or four years.

WM. MANLIUS SMITH,
For the Committee of Publication.

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4. REPORT OF COMMITTEE ON PRIZE ESSAYS.

The Committee on Prize Essays, respectfully report, That but one Essay has been forwarded to them for examination. It is entitled "Turbercle and Cancer," with the motto "Et nume Erudimini," on a sealed envelope. An unnecessary precaution, as the author in the course of his article reveals his identity, by reference to, and extracts from his previous Prize Essay published in the Transactions of the New York State Medical Society for 1871, page 158. This alone, by strict construction of the conditions governing "Prize Essays," would exclude the paper; but as this was probably an unintentional error, it is not urged, but is emphatically mentioned as a warning to future contestants. The aim and intent of the writer is to show the intimate relation between Tubercle and Cancer in the production of each other, for which he cites his own observations, limited to one family, and quotes from various writers. This he does very well, with the exception of a few orthographic errors. The Essay presents thoughts and ideas which may be new to many medical men, and certainly merit careful and attentive consideration. The Essay is deemed worthy of publication, after revision to correct errors, but it is not of that original and high

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standard to entitle it to the prominence and distinction of a "Prize Essay"—and as this is the only paper presented, no award is made.

THOS. F. ROCHESTER,
WILLIAM S. ELY,
Committee on Prize Essays.

The Committee report with profound grief and pain, that one of their number, Prof. James P. White, M. D., died September 28, 1881.

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5. REPORT OF CENSOR OF COLLEGE OF MEDICINE, SYRACUSE UNIVERSITY.

I would respectfully report that in pursuance of my appointment as Censor of the College of Medicine of Syracuse University for the year 1881, I attended the Ninth Annual Commencement at Syracuse, June 9, 1881. The morning was devoted to the oral questioning of twenty applicants for the degree of Doctor of Medicine, and in the afternoon I looked through their written examination papers.

On both occasions I was favorably impressed with the evidence given of more than average qualifications for the degree of Doctor of Medicine, which I deem must be largely attributed to the graded system of instruction in force at this school.

Respectfully submitted,
WILLIAM S. ELY.

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6. REPORT OF COMMITTEE ON EXPERIMENTAL MEDICINE.

ALBANY, N. Y., Feb. 7, 1882.

To the Secretary of the Medical Society of the State of New York:

SIR—At a meeting of the Committee on Experimental Medicine, held in the city of New York, on January 18th, 1882, the undersigned, as is expressed in the accompanying letter of credence, was appointed a sub-committee of one, to make the annual report of the committee, as follows:

At the time of the last meeting of this Society a bill "to prohibit the vivisection of animals" had been introduced, at the instance of Mr. Bergh, into both houses of the Legislature of 1881, and had been in each referred to the Committee on Public Health.

To the Senate this bill was never reported; to the Assembly the bill was reported adversely, on February 18th, 1881, and the report was at once agreed to.

This bill was identical with that introduced and rejected in 1880. It will thus be seen that this attempt to obstruct the science of medicine has assumed the character of a chronic agitation, and that the vigilance of your Committee, and of the medical profession throughout the State, must continue unabated in the future, as in the past, from year to year.

It is of the first importance, not only that our science should not be debarred from advancing by a prohibition of experiments upon animals, but that no measure should be permitted to pass which, under the specious plea of more effectively preventing abuses at the hands of the unqualified, would really so act as to harass qualified experimenters.

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The experience of the medical profession in England is a most instructive warning. In that country an act of Parliament, passed some years ago, placed the authorizing of experimentation, by license, in the hands of the Secretary of State for Home Affairs.

The result of this system may be briefly shown by quoting the words of an English physiologist.

Dr. Michael Foster, Professor of Physiology at the University of Cambridge, and author of a well known text-book, was President of the physiological section of the late International Medical Congress. He concluded as follows his address as President of the section. (The quotation is taken from pages 49 and 50 of the Nineteenth Century," American reprint, for December, 1881.)

"At the present day careers are opening up, and a fair amount of useful work is, I trust, being done, or rather perhaps would be done, had not, in this country, physiology fallen upon evil days of a kind unknown in the eighteenth or any other century. A zeal, not according to knowledge, has, whatever commendable impulses may have nurtured it, given rise to legislative action, which has gone far to cripple physiological research in this country. Our science has been made the subject of what the highest legal authority stated in the House of Lords to be a penal act. We are liable at any moment in our inquiries to be arrested by legal prohibitions. We are hampered by licenses and certificates. When we enter upon any research we do not know how far we may go before we have to crave permission to proceed; we sigh in our bondage like the Israelites of old; we are asked to make bricks when they have taken away from us our straw. One good fruit of the present Congress may be this, that our foreign brethren, seeing our straits, will go home determined in their respective countries to resist to the utmost all attempts to put the physiological inquirer in chains, for we surely are all agreed that experiment is the best weapon with which we can fight against the powers of darkness of the mysteries of life."

Turning now from the testimony of a friend of science in England to that of an enemy, one may find much to reflect upon in the following copy of an advertisement, the original of which was cut from a London newspaper, of September, 1881, and forwarded to your committee, by one of its members, Professor Henry B. Sands, M. D., of New York:

"VIVISECTION.—The Beginning of the End.

"The Home Secretary has REFUSED CERTIFICATES to Professor Frazer, Dr. Lauder Brunton, and Professor Lister, for carrying on investigations which they declare to be of 'the highest value to medical science.'

"GEORGE R. JESSE,
"Honorary Secretary, &c.,
"Society for the Abolition of Vivisection.

"Henbury, near Macclesfield, Cheshire, Sept. 10, 1881."

Owing to the late date of the organization of the Legislature of 1882, no so-called "anti-vivisection bill" has yet been introduced; but doubtless one will be introduced before the end of the present session.

In view of all that goes before, your Committee would recommend to the Society the passage of the following preamble and resolutions, viz:

Whereas, There is reason to believe that, like its predecessors the Legislature of 1882 may be asked to pass an act to forbid or restrict the performance of experiments upon animals for scientific purposes, and,

Whereas, The performance of such experiments by unqualified persons is already illegal, under section 10 of an act approved April 12th, 1867, "for the more effectual prevention of cruelty to animals," which section reads as follows:

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"Nothing in this act contained shall be construed to prohibit or interfere "with any properly conducted scientific experiments or investigations, which "experiments shall be performed only under the authority of the faculty of "some regularly incorporated medical college or university of the State of New York."

Now, therefore, be it

Resolved, By The Medical Society of the State of New York:

I. That it is the unanimous opinion of the members of this Society that the unrestricted performance, by qualified medical men, of scientific experiments upon animals is essential to the maintenance and progress of the science and art of medicine.

II. That, while this Society would thus set forth to the Senators and Assemblymen, in Legislature assembled, the views of the medical profession of the State upon this subject, it would also call their attention to the fact that, at the late International Medical Congress in London, a formal resolution, denouncing interference with experimentation upon animals, was adopted by more than three thousand official representatives of the medical profession of the world.

III. That, in the event of the introduction of any so-called "anti-vivisection bill" into the Legislature of 1882, it shall be the duty of the Committee on Experimental Medicine to forward a certified copy of these resolutions, as a memorial from this Society, to the Governor of the State of New York, and to each house of the Legislature thereof.

Your Committee would further offer the following resolution for adoption by the Society:

Resolved, That it is the duty of each member of this Society, before leaving Albany, personally to lay the views of the Society, upon the so-called "anti-vivisection" agitation, before the Senator and Assemblyman who represent him in the present Legislature.

All of which is respectfully submitted.

By order of the Committee on Experimental Medicine.

JOHN G. CURTIS, M. D.,
Delegate from the College of Physicians and Surgeons.

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7. REPORT OF THE SPECIAL COMMITTEE ON CODE OF ETHICS.

The Special Committee on Code of Ethics, appointed February 3, 1881, after careful consideration, recommend that the following be substituted for the System and Code of Ethics now in force.

WM. C. WEY, *Chairman*,
C. R. AGNEW, M. D.,
S. OAKLEY VANDERPOEL, M. D.,
WM. S. ELY, M. D.,
HENRY G. PIFFARD, M. D., *Secretary*.
} Committee.

CODE OF MEDICAL ETHICS.

I. THE RELATIONS OF PHYSICIANS TO THE PUBLIC.
II. RULES GOVERNING CONSULTATIONS.
III. THE RELATIONS OF PHYSICIANS TO EACH OTHER.

I.—THE RELATIONS OF PHYSICIANS TO THE PUBLIC.

It is derogatory to the dignity and interests of the profession for physicians to resort to public advertisements, private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine

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to the poor without charge, or promising radical cures; or to publish cases or operations in the daily prints, or to suffer such publications to be made; or through the medium of reporters or interviewers, or otherwise permit their opinions on medical and surgical questions to appear in the newspapers; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform other similar acts.

It is equally derogatory to professional character, and opposed to the interests of the profession for a physician to hold a patent for any surgical instrument or medicine, or to prescribe a secret nostrum, whether the invention or discovery or exclusive property of himself or of others.

It is also reprehensible for physicians to give certificates attesting the efficacy of patented medical or surgical appliances, or of patented, copyrighted or secret medicines, or of proprietary drugs, medicines, wines, mineral waters, health resorts, etc.

II.—RULES GOVERNING CONSULTATIONS.

Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity.

To promote the interests of the medical profession and of the sick, the following rules should be observed in conducting consultations.

The examination of the patient by the consulting physician, should be made in the presence of the attending physician, and during such examination no discussion should take place, nor any remarks as to diagnosis or treatment be made. When the examination is completed, the physicians should retire to a room by themselves, and after a statement by the attending physician, of the history of the case and of his views of its diagnosis and treatment, each of the consulting physicians, beginning with the youngest, should deliver his opinion. If they arrive at an agreement, it will be the duty of the attending physician to announce the result to the patient, or to some responsible member of the family, and to carry out the plan of treatment agreed upon.

If in the consultation there is found to be an essential difference of opinion as to diagnosis or treatment, the case should be presented to the patient, or some responsible member of the family, as plainly as possible, to make such choice, or pursue such course as may be thought best.

In case of acute, dangerous or obscure illness, the consulting physician should continue his * visits at such intervals as may be deemed necessary by the patient or his friends, by him, or by the attending physician.

The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, but as professional engagements may interfere or delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe, but if it be the consulting physician, he should retire, except in an emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in writing, and under seal, to be delivered to his associate.

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*During the debate on this report, before its adoption, the word "consultation" was, on motion, inserted before the word "visits," in this place.

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III.—THE RELATIONS OF PHYSICIANS TO EACH OTHER.

All practitioners of medicine, their wives, and their children while under paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired.

Gratuitous attendance cannot, however, be expected from physicians called from a distance, nor need it be deemed obligatory when opposed by both the circumstances and the preferences of the patient.

The affairs of life, the pursuit of health and the various accidents and contingencies to which a medical man is peculiarly exposed may require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy which should always be performed with the utmost consideration for the interests and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy without awarding to the physicians who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

Diversity of opinion and opposition of interest may, in the medical as in other professions, occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians before appealing to a medical society or the law, for settlement.

If medical controversies are brought before the public in newspapers or pamphlets, by contending medical writers, and give rise to, or contain assertions or insinuations injurious to the personal character or professional qualifications of the parties, the effect is to lower in the estimation of the public, not only the parties directly involved, but also the medical profession as a whole. Such publications should therefore be brought to the notice of the County Societies having jurisdiction, and discipline inflicted, as the case may seem to require.

NOTE.

The report of the Committee on the President's Inaugural Address, was, by request sent by the Secretary to New York for revision, and was there accidentally destroyed. The resolutions however, which formed the main part of the report, are given in the Proceedings at pages 58 and 59.

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INFANT FEEDING AND INFANT FOODS.

THE ANNIVERSARY ADDRESS,

Before the Medical Society, of the State of New York, at the Seventy-sixth Annual Meeting, by Abraham Jacobi, of New York, M. D., President of the Society: Delivered in the Assembly Chamber of the Capitol, at Albany, N. Y., February 8, 1882.

Mr. Vice-President, Ladies and Gentlemen, Members and Delegates of the Medical Society of the State of New York:

I hold in my hand a report of the Committee appointed to co-operate with the New York Society for the Prevention of Cruelty to Children, "in all things pertaining to the physical and moral safety of infants and children." The report I refer to was read in last year's meeting, and has been widely distributed by the above-named Society. One of the measures contemplated and advised in it was, that there should be a place or places in large cities, where the infants and young children of the poor might be supplied, at cost, with the simple though sufficient articles of food. These simple and sufficient articles of food were milk, barley, oat-meal, and, for those no longer infants proper, eggs. Their value as infant food for those who were without breast-milk, was taken for granted, and considered almost in the light of an axiom. To make it so has been one of the duties of my life. Truth, however, is frequently suspected because of its very simplicity, and often do we see complicated and roundabout means and measures resorted to in preference to plain and direct ones. Now, what I have to say may, in part, appear very common-place and trifling, because of its application to common-place things and interests. But questions are involved which it has

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taken, and will still take, much time and labor to solve. To render the results hitherto obtained available, the normal feeding of the infants possible, and to protect them from the injuries inflicted by ill-directed love, ignorance, and the evil-devised plans and frauds of what is called commerce and industry, will be the object of the brief remarks which I shall have the honor to make before you in regard to the dangers to which our infants are constantly exposed.

Mortality amongst infants is very great. In Europe, out of one hundred born alive, eighteen die before they reach the end of their first year. Out of one hundred who die at all ages and of all diseases, in New York City, twenty-eight are less than a year old. The causes of these deaths vary; it is a characteristic fact, however, that of all those taking place in infants under a year, from 40 to 53 per cent. are the result of diseases of the organs of digestion.

Thus the attention of the physician called to see a sick child is mostly claimed by the alimentary canal. His care and that of the mother or attendant is therefore due to preventive measures mostly. The best preventive measure, and sometimes it proves curative, is the best breast-milk of mother or wetnurse. That is an axiom, an indisputable law of nature, as long as the circumstances of the case are favorable. In view of the great mortality in the first two months, breast-milk is the one and indispensable food for those under two months. A mother who refuses to nurse *at least that time* for other than reasons of health or life, is an accomplice in causing, perhaps even the only cause of, the death of her offspring. It is true that a baby may be taken sick with intestinal disease in spite of being nursed at the breast, for there are *many* causes of disease; it may, moreover, occur that babies are taken sick *because* of being at the breast. And it is those cases that both mothers and physicians ought to be well acquainted with. Sometimes it is not the breast-milk which is at fault, in the beginning, but the faulty use it is put to. Many babies suffer intensely because they are not limited to intervals of from 2 to 4 or 5 hours, as required by either age or constitution. In their cases, by too frequent feeding, both the milk of the mother and the digestion of the infant, are impaired. Here regularity is the sole indication. Sometimes, though fortunately in few cases only, there appears to exist

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an idiosyncrasy not explained, on the part of the baby who cannot thrive on the milk of the mother, and may do so after a change of food. In many cases, however, there are demonstrable dangers in the very breast-milk of either mother or nurse; there may be an undue percentage of fat, or of cheese, or of salts, or of sugar, or even accidental admixtures. These may occur in the secreting organ (thus blood may be found in the milk) or be traceable to the circulating blood of the whole system; of the latter, they may be the very constituents, or foreign bodies floating in it. They can be classed as either morbid dispositions or as actual admixtures. Women suffering from constitutional syphilis, chronic consumption, or anæmia, extensive rachitis, severe nervous derangement, hysterical or other, those suffering from care or hard work, and those who are compelled to take a great deal of medicine, will serve their babies best by not nursing them at all.

In regard to the influence of the medicines, the opinions *have* been divided. It was claimed that milk being a secretion of the gland, and not a transudation from the blood, would not contain foreign material to any great extent. That is true so far as an absolutely healthy woman and normal milk are concerned. But the first period of lactation yields colostrum, not normal milk, and very often the latter is changing into a colostral condition, such as it was soon after birth, containing different-shaped fat globules, more sugar, soluble albumen, in fact, real blood serum. This may take place in every case of impaired health. And the more serum of blood is contained in any milk, the easier is the admixture of soluble substances circulating in the blood. Such substances are ethereal oils, coloring matter, iron, iodide of potassium, arsenic, zinc, mercury, salines, bismuth, lead, antimony, nitrate of potassa, magnesia, all of which have been frequently found in the milk, and frequently missed. They will be missed the more frequently the healthier the woman and her mammary secretion. But, as I formulated the subject some years ago, milk secreted from an insufficient mamma, by a woman not in full health and vigor, by an old woman, by a very young woman, by an anæmic woman, by a convalescent woman, who has consumed a large portion of her albumen, be it circulating or tissue albumen, by a neurotic woman with frequent disturbances of the circulation—milk, in fact, which is not the nor-

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mal transformation of the elements of the mammary glands, but consists of more or less transuded serum, is apt to be impregnated with elements circulating in the blood. The indications on one hand for the permission to nurse, on the other, for the administration of medicines to a nursing woman, require, therefore, a greater strictness than is usually conceded. At all events, the good results obtained in many cases of ailment on the part of the infant, *by artificial feeding, in preference to nursing*, are better than accidental.

Those infants who are thus deprived of breast-milk, or never had it, or have an insufficient supply of it, require artificial feeding. The material resorted to ought to be as much like mother's milk as possible; and naturally, when human milk cannot be had, animal milks are selected. Among them only two are available to any extent, that of the goat and of the cow. If there be any objection to either, it is principally valid in regard to the former. For the chemical incongruities and other difficulties, to which I shall briefly allude in regard to cow's milk, are even more pronounced in the case of goat's milk.

My remarks of this evening I expect to be of a practical nature throughout, and brief. Thus I shall not try to go into chemical or physiological questions beyond the time allotted or the opportunity afforded. Therefore, I shall allude to but two points which it is interesting to appreciate, in order to understand why it is that cow's milk, as a sufficient substitute for mother's milk, must necessarily be a failure.

Human milk and cow's milk differ mainly in that the percentages, and probably also the properties, of fat and of caseine contained in them, differ widely. The percentage of fat in cow's milk is larger than in human milk, and, on close observation, we shall learn that woman's milk contains as much fat as the young digestive organ can tolerate. From what we know of the infant pancreatic gland, we must conclude that its property of digesting fat is but simply developed soon after birth, and daily observation proves that such is the case. When you examine chemically the normal alvine dejections of the infant, well mixed, uniform, and yellow, you will discover not only fat acids, but free fat to the extent of about 12 per cent. Some more fat leaves the intestines in a saponified condition. Many of the passages which have been

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believed to contain caseine in excess, because of their white color, were found to contain large quantities of fat. And all this happens when the normal infant is fed exclusively on breast milk. Now if much fat is not required nor absorbed under normal circumstances, if fat acids form so easily when the digestion is apparently normal, with the constant tendency of deranging digestion; if we know, as we do, that even normal breast-milk contains more fat than the infant has any use for, we must admit that in artificial feeding, with cow's milk or other material, we are in greater danger from giving too much fat than too little. Good milk has been called that which contains most fat, say from four to five per cent. The more cow's milk deserves the title of being good—that is, fat—the greater is the danger arising from giving it to infants without considerable modification. This result authors appear to gradually appreciate. When Forster fed a baby of four months with cow's milk and rice decoction in the proportion of 1 to 4, all the albuminous substances and sugar of this mixture had disappeared when the fæces came to be examined. Thus they were entirely digested, but of the ashes 34, and of the fat 30 to 40 per cent. were found unchanged. This experiment proves, in the opinion of Prof. Bollinger, whom I rejoice in quoting, that a milk less rich in fat is more adapted to serve as infant food than one with a large percentage of fat; and further, that cows whose milk is destined to be used as infant food, ought to be fed so as to reduce rather than increase the amount of fat contained in it. A good authority, Prof. Feser, makes the distinct statement that the milk he examined on the Alps of Switzerland, and which he prefers greatly as children's food, contained less fat than that from the cows in the neighborhood of a large city. If that be so, and it is so, I recommend as a matter of practice that the morning milk, with its lesser percentage of fat (butter), should be given, in preference to evening milk, if any at all.

Now, if the excess of fat be one of the causes why cow's milk should not be employed as infant food, why not remove it or diminish its percentage? Easily said, not easily done; for when milk is allowed to stand, and the cream to rise, the milk at the same time changes its reaction. Instead of being alkaline or neutral, it becomes acid, and acid milk is a danger which an infant must be protected from. Some years ago,

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Lefeldt and Delaval invented each an apparatus which, by rapid centrifugal motion, separates the cream from the milk very thoroughly. Such an apparatus may, perhaps, be found useful in reducing the normal fat of cow's milk to an acceptable standard in the future. For the present, however, I know of no proceeding which accomplishes the end in view; and, while submitting to the unavoidable, I must protest against the avoidable occurrence which is reported to have taken place in a court of justice but lately. In one of the skim-milk police cases—and unfortunately there are less "cases" than adulterations—the expert for the defence, a well-known chemist, tried to clear his client by proving him a public benefactor, inasmuch as Dr. Jacobi objected to an excess of butter in the milk used for children.

Caseine is represented in cow's milk in a larger percentage than in human milk. To reduce its relative quantity, compared with the rest of the solid constituents, is possible by the increase of these only. There is no method by which its absolute quantity in a given amount of milk could be diminished, except such as would render the remaining part of the milk unfit for use. This diminution, moreover, would have to be a very thorough one, for a mixture containing more than 1 per cent. of caseine has been found to be indigestible by Hammarsten, and by Biedert. But these are not the only objections to cow's milk caseine. Not only is its percentage in the milk too great; its chemical and physical properties *differ greatly* from that contained in human milk. Mineral, acetic, and tartaric acids, epsom salts, phosphate of lime, form a dense and hard coagulation with the caseine of cow's milk, while human milk coagulates in loose and small flakes only, under the same circumstances. Cow's milk, when introduced into the infant stomach, forms hard curds; if the organ be strong, or the infant liable to vomit easily, as most of them are, thick massive pieces of cheese are thrown up, and relief will follow. If no vomiting occur, these hard masses are propelled into the intestinal tract, where sometimes they give rise to obstruction. Sometimes, however, they irritate the canal to such an extent, that *diarrhœa* is the result. In both cases lumpy cheese is the main constituent of the evacuations. In every case of infant diarrhœa, the examination of the passages ought to be made; in many cases the appearances will be found as de-

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cribed, and no case of the kind will terminate favorably unless the food be changed. To say that these cases will occur, would not do justice to the facts. They are very frequent, I have seen hundreds; but lately a child of sixteen months of age, and of six pounds in weight, was presented to me with the same symptoms, and with the additional remark, not only that everything had been done by the medical adviser to stop the exhausting diarrhœa, but also that a cow had been purchased for the sole purpose of furnishing pure milk for the suffering baby. That suffering baby was instantly improved when the pure milk was stopped, and more suitable food was substituted.

The objections to cow's milk, as the exclusive diet of infants, in place of mother's milk, which cannot be had, are dependent on its very chemical composition and physical properties. These cannot be changed by the most studious and successful attempts at procuring the most uniform and pure article possible. That, however, does not prove that a bad or indifferent milk is as good and useful as the very best milk from the very best cows. The inference is rather this, That the employment of inferior milk is criminal when good milk can be had through precaution, care, and industry. To have accomplished that purpose is the pride of several European cities. In some it was through medical societies that the idea was started and put into effect, to procure as good milk as cows of good stock, well fed, under favorable sanitary conditions, could furnish. Stuttgart had the first establishment of the kind; that in Frankfort-on-the-Main commenced its operations in 1877, with thirty cows, and increased that number to eighty-one in 1881. The amount of milk produced, and delivered to consumers, in 1881, was 313,563 litres (quarts), more than ten litres per cow daily. The establishment is private property, but to earn the support of the public, and to secure the desired co-operation of the physicians of the town, the proprietor bound himself not to engage in any other business, and solicited the control and advice of a committee, consisting of three delegates of the medical society, one veterinary surgeon, and one chemist. Great pains are taken in the purchase of animals of good stock, all of them thus far being imported from Switzerland. Before they are admitted they are examined by the veterinary surgeon, who superintends the institution, and keeps a record of

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those who may fall sick. Two months before calving the milk is not sold at all. Cows of the age of from three to eight years are considered the only available ones. The stables are well ventilated, and washed, drained, and connected with the system of city sewers. The floors of the stalls, the ceilings, and the lower part of the walls are cemented. The skin of the animals is looked after with great care. The stables are so near the city limits, that the milk cannot suffer by transportation. It is tightly corked in half-litre and litre glass bottles (this process being cautiously watched), and speedily delivered. Printed directions for its further treatment accompany the article. Besides, stress is laid on avoiding a prejudice on the part of the public, to which I have raised objection long ago with but very partial success, viz., not to select the milk of a special cow for the special use of the same individual, but to mix and equally distribute the milk of the whole dairy.

A great innovation for practical purposes, based on good experiments and long experience, is that no change of food takes place, and poisonous, purgative, or otherwise injurious admixtures to the food of the animals are avoided. Dry food only is given, viz., 15 kilog. (30 pounds) of hay, 6½ kilog. (13 pounds) of meal and bran, 6 grammes (1½ drachms) of salt, and spring-water to drink.*

Human knowledge and foresight have almost exhausted themselves in these praiseworthy efforts. But the result of them all is *good cow's milk, and no equivalent for mother's milk.* But do I mean to say that cow's milk, given pure, or cow's milk mixed with water, is absolutely injurious, poisonous to babies? Far from it. The undeniable fact that there are infants who thrive on that exclusive diet, or whose general condition of health remains such that no medical or medicinal interference in their behalf appears called for, would give the lie to such an exaggerated opinion. Still, there are a great many infants *who appear* to thrive better than *they actually do.* Many grow fat and rotund on improper food, no immediate harm makes its appearance, and still you see many such as increase in weight, even more than the average infant, and still lay a gradual foundation for future ailing. For such fatness and rotundity means, too frequently, rachitis, and re-

* Dr. V. Cnyrim, in "Frankfort-on-the-Main, Its Hygienic Conditions and Institutions."—*Ed. by Dr. A. Epiess*, 1881.

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quires watching and change of food. Still, the number of infants remaining in good condition on that food is not very small. What does it prove? Nothing else than that the digestive processes permit of a certain latitude, that nature does not do routine work, and that the sum total of vital processes do not respond to certain occurrences, or influences, like reagents in a chemical test, where the same process always yields the same results. There is *no food, on which certain infants will not thrive.* But when, in a large percentage of cases, the same unfortunate results are exhibited, and when these can be traced to their exact and uniform cause, that particular food is to be condemned. The assertion of many that cow's milk is an exact substitute for human milk, is the counterpart of that which claimed equality for animal and human blood. The practice, based upon this assumption, resulting, as it did, in the transfusion of animal blood into the human circulation, outlived itself very speedily.

Cow's milk, as a universal substitute for mother's milk, has lost its credit with many through the differences in the article; which, however, as long as no adulterations are perpetrated, are less marked than the same secretion of the human being. If that were not so, how does it happen that all over the civilized world substitutes are sought for, offered and purchased, though milk be as cheap and handy as anything else? Why is it that to avoid cow's milk, untold risks are run in procuring more expensive, more unknown and more unreliable vegetable compositions, which seldom keep the promise loudly displayed on the labels? What are these promises? What does it mean when they claim to take the place of mother's milk?

Mother's milk is considered the best prepared article of food known, though, as you have been told before, it may be—it could have been improved upon. Perhaps *it is* the best, though; at least there was a time when we all were of that opinion; for perhaps the surplus fat, which passes off undigested, may serve some purpose hitherto unknown. An ideal article of food must serve two purposes and consist of two classes of constituents. It must, in the infant, supply the growing tissue with material sufficient to take the place of that which is constantly wasted, and to allow a surplus for increase; and, secondly, supply fuel for the purpose of keep-

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ing up the production of an equable temperature and the functions of the organs, mainly those of respiration. The first requirement is fulfilled by the proteinous, or albuminous, substances, the other by carbo-hydrates. This statement would require modifications, if it were the object to be absolutely correct, for the two classes will supply each other, act vicariously for each other, even change into each other, under certain circumstances, in the complex machinery of the human system. The albuminous tissue-builder in the milk is mainly caseine, sometimes, also, albumen; the second class is principally represented by fat and sugar. In vegetables the first class is represented in the gluten, the second mainly in the starch. If you add that in the milk, the ideal food, the proportion of the first class to the second is about 1 to 4, the vegetable substitutes are to be judged, in regard to their mere chemical composition, to that formula of about 1 to 4.

But it is not the chemical formula alone which determines the rank of a substance as a nutriment. To the equivalents of the chemical formula of cow caseine infant mathematics would not object, did not the infant stomach revolt against it. Thus it is not exclusively the chemistry of an article, but its digestibility, which comes into question. Now, not everything is equally digestible for everybody, sick or well, old or young, adult or child, child or infant, infant or newly born. And particularly is that so with regard to starch, which forms such an overwhelming part in the composition of vegetables, and particularly of those which are mainly used for the purpose of the mauufacture of infants' foods.

Starch is changed into sugar and rendered digestible by the secretion of two sets of glands, the salivary glands and the pancreas. The latter does not possess that function before the end of the first month of life. The former begins to peform the same function, to a certain degree, immediately after birth. The experiment has been made by Schiffer, Korowin, and many others. Starch, enclosed in a small bag, is introduced into the mouth of the infant. After a certain time the starch is found to be transformed into sugar. To collect fifteen grains of saliva in a baby of two or three weeks took from fifteen to thirty minutes; in a baby of two months, but one or two minutes. Thus two facts result from these experimental observations: 1. That starch is digestible at any age; 2. That

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the transformable and digestible amount of starch is but very small in the first weeks of an infant, and increases gradually. About the eleventh month the digestive property of the saliva is equal to that of an adult, when the quantities are equal.

The inferences to be drawn are: 1. That farinaceous foods may contain starch, but *starch must not be the main part* of the food; 2. That when they contain a great deal of starch it is best to change it, by a thorough baking process, into dextrine, which is changeable into sugar, and is easily absorbed and utilized; 3. That those farinacea ought to be selected for infant food in which the proportion of gluten to starch favors the former.

There is another consideration of vast importance, which, when the infant foods now in the market were first manufactured, could not be known. Starch is not the same article everywhere. In different substances it requires different times to be transformed into sugar. Potato starch requires 2 to 4 hours, that of peas 1¼ to 2 hours, wheat ½ to 1 hour, barley 10 to 15 minutes, maize 2 to 3 minutes.

Guided by these facts, I invite you to scan with me a number of farinaceous substitutes—their claims, promises, and powers. You will notice, there is not one of the men or companies who supply them but is loud in the praise of his gift to infancy; not one but ranks in his actual or alleged estimation as the arch-benefactor of mankind.

Justus von Liebig's (the great chemist) substitute consisted of the flour of wheat and barley malt, bicarbonate of potassium, water, and milk in certain proportions. For about twenty years this preparation has been the subject of eulogies and reproaches, until in its original form it has been nearly given up; for its home preparation is not so easy as its inventor claimed.

It requires too much care and attention from a person of intellectual undersize. Besides, everything containing sugar is liable to decompose in summer by fermentation and moulding; all preparations *really dry* have a bad taste. Moreover, the phosphate of lime, which, it is true, is found in sufficient quantity in both wheat and malt, does not get into the solution, and finally, *for its preparation*, you always require *milk*, milk in winter and summer, milk in city, and country, with all its actual or alleged dangers. Still more, it has,

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though prepared ever so carefully, proven unsuccessful in too many cases. Diarrhœa has often resulted from its use. Numerous attempts have been made to put it up for the market in such a shape that little time and no intellect might be required for its final use. *Loefflund's* article has the merit of being no fraud as far as I know; that of *Liebe* I paid attention to when it was first largely advertised for sale. A dozen bottles contained in a box were examined; their consistency and composition differed considerably. Another preparation, alleged to be compounded according to the prescription of the great chemist, is sold with the name of his son, *Herman von Liebig* attached to the recommendation of the label. He has a great deal *too much* to say in its praise. "1. This remarkable preparation accomplishes everything that can be expected of a substitute. 2. Although the flour is a perfect nutriment in itself, I still recommend on my labels its mixture with cow's milk. 3. Where good cow's milk cannot be had, condensed milk may take its place. 4. Infants fed on cow's or condensed milk, ought to have it mixed with my flour." You see the unsophisticated public must come to the conclusion that the object and destination of this food is no other than to be purchased.

Next in order is *Nestle*, as widely known as plantation bitters and cider vinegar. This food consists of milk, wheat flour (alleged to be baked, for the purpose of crushing the cellulose and cell membranes), sugar, and salts. As a chemical critic says (H. Mueller, in *Pharm. Centralhalle*, xvi., 1875, n. 34), he publishes no analysis but advertisements only; and he knew how to advertise. I remember well when the people of New York awoke one morning to find their libraries increased by a big pamphlet containing the new revelation. It was written by no less a person than an emeritus university professor of pathology, in his time a justly celebrated man, Lebert, who passed his very old age in the neighborhood of where Nestle had established his health, life, and money-breeding factory. Every such pamphlet commences with a declaration of principles. This begins by telling the reader that cow's milk is more "nourishing" than human milk; that, however, the addition of water does not make it any more similar to the latter; and that the nursling ought to have cow's milk at once alongside that of his mother—probably to improve upon na-

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ture's plan. Then why does he want or recommend substitutes, if cow's milk does so well? For the simple reason that if people would feed their own cow's milk, they would not purchase Nestle's; and in order to induce them to do the latter, he tells you that your cows may be tubercular, may be fed improperly, their milk may be adulterated with water, or may contain disease germs. Nestle's cows are not tubercular, we have to infer, are not fed improperly, their milk cannot be adulterated, nor does it contain disease germs—indeed not. For it is the milk of *Swiss cows*, with such a halo round their horns, that even that public-spirited institution, called St. John's Guild, of New York, publishes an advertisement of Anglo-Swiss food, on the last page of its pronunciamento on the bringing up and feeding of little children, which is distributed gratuitously, or for an annual contribution of three dollars.

We are assured that Nestle examines his materials very carefully, uses bread made only of the very best wheat, and the crust only; and that the starch is transformed into dextrine and sugar, under a pressure of a hundred atmospheres, by overheated steam. Thus Nestle's food is not only the very best nutriment for infants, but also for mothers who would fain raise a supply of milk in their own breasts, though it appears that that would be an uncalled-for desire in the face of all that is said about Nestle's food being a perfect substitute. All of which is respectfully submitted by Mr. Nestle's prompter, Prof. Lebert, or perhaps, rather by Prof. Lebert's prompter, and most of which is untrue.

Many years ago, fifteen or more, when Nestle and Lebert discharged their pamphlets, advertisements, and agents upon America, I was induced to try and employ Nestle's food; I could not say that in children of a few months or a year it did any harm; on the contrary, it was fairly tolerated by most of them. I consented even to add my name to those of others recommending the article—the only time I ever did so in my life. A few years after, another advertisement appeared which advised rather against the purchase of the former preparations and recommended the recent modification. It was then, at last, that I resolved to scrutinize what I had recommended in good faith without any examination. I found, 1, that the contents of a number of boxes did not closely resem-

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ble each other; 2, that the main substance was made of starch; 3, that even the cell membranes were not equally crushed, and a great many not changed at all. It has also been found, and urged mainly by Eliza McDonogh (*Inaug. Diss.*, Zurich, 1877), that the fragments of the microscopic elements exhibit the appearance of mechanical destruction, and not that brought about by heat. J. Miescher also states that he finds no essential difference between Nestle and common flour. Iodine yields instantly its blue reaction; the starch elements are partly free, partly still locked up in their cells. Some particles are albuminous, they turn yellow with iodine. In his experiments the watery extract was alkaline, in those of McDonough it was acid, and contained but little dextrine. Cnyrim found in the boxes examined by him, sugar and dextrine to the amount of 45.56 per cent., but still 20.76 per cent. of starch were left without any change whatsoever. And the result of Jacobson's examinations is that the contents of the boxes are not alike.

Gerber, also a large advertiser, and Nestle's Swiss rival in America, claims to have improved Nestle's flour by a difference in the process of preparation; the methods of which, however, are not communicated. His flour is wheat, which is again praised as the one article containing all the material required by the growing body in the smallest possible bulk. The same enumeration of the elements is made of an organic salt, and their mixture with organic substances is spoken of as if it were a new discovery. Potassium and phosphatic combinations, albuminates, carbon hydrates, fats, are whirled about in the most impressive and bewildering manner by every one who has a cheap article for sale at a high price. The greatest stress is always laid on the presence in the article offered for sale of all the chemical elements necessary for the building up of the body. But that presence alone, I repeat, is not sufficient; chemical figures and equivalents still enjoy too much respect and a sort of superstitious veneration. A *thorough preparation preliminary to digestion* is required, though the proportion of elements in a mixture were ever so appropriate. In regard to wheat, however, *this proportion is not the very best* at all, for wheat contains more starch than do barley or oat-meal.

In regard to both of them, Nestle and Gerber, Drs. Altherr

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and Lorch, in a little book entitled "On the Weighing of Infants for the purpose of determining the Nutritive Value of Woman's Milk, Cow's Milk, Nestle's and Gerber's Flours, and Liebig's Soup," Erlangen, 1877, have no great praise to bestow. Both are declared to be improper foods for the newly born and infants in the first few months; but they admit in the latter months of life, when farinaceous foods of all kinds are well tolerated, they also may be given in the same manner. Similar observations have been made in the Child's Hospital, at Berne, Switzerland; and similar remarks are due to the *Anglo-Swiss Food*, which contains milk, some gluten, and plenty of starch, like the others.

In all of the twenty-two European infant foods examined by Eliza McDonogh, the starch was never changed to such a degree as to render the recognition of its source impossible. Wheat, corn, rye, barley, could always be recognized under the microscope. A number of the granules were broken up it is true, but many more were intact. Thus, not even the very exact and uniform distribution of the starch is accomplished. All of them consist of baked flour of some kind, either by itself or mixed with sugar, milk or salts. There are some, however—for instance, that of Hartenstein—consisting of wheat and oats, which has not even undergone the baking process.

Part of these European preparations have been naturalized with us. Some have made a great reputation, and probably money for many beneficent manufacturers, agents, and salesmen. But they are not alone in the field. Saul slew a thousand, David ten thousand. Europe has twenty-odd infants' foods, America more than twice that number. Infants must no longer complain of lack of interest roused in their behalf.

Nature is the same all over; the nature of all natural things alike; that of wheat, oats, and manufacturer, wherever they be found. Thus the same results in regard to the composition of "infant foods" are reached here as in Europe. But a few days ago I was pleasantly surprised by the brief statements of Dr. E. C. Cutter, who, for *Gaillard's Medical Journal* (Jan., 1882), has undertaken the task of studying (microscopically) all the infant foods in our market. His researches, naturally, refer mainly to the proportion of gluten to starch. And some of his statements I shall refer to here,

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desiring to give them the greatest possible publicity. I wish the brief article of his would be distributed in a hundred thousand copies, reprinted in every secular paper, read from every platform and pulpit of the land. For it is time that fraud should be stopped, and a nefarious trade suppressed.

Amongst the better preparations are *Mellin's Food.* It claims to be the only substitute for mother's milk, and not farinaceous. It is not the only substitute, but the starch is converted into dextrine, as in *Horlick's Food.*

Franklin Mills Wheat Flour contains more gluten than most of the rest. So does *Arlington Wheat Meal,* which is ground coarsely, and contains much gluten. Also *Hawley's Liebig's Food,* which contains wheat gluten cells, barley gluten cells, barley tegument, wheat starch, and cooked granular masses, which do not polarize light.

Mead's Mulled Wheat Flour, a course flour or meal, which does not polarize light well; a good preparation.

Baby Sop is made of unhulled oats, malted and crushed, and contains all its elements; gluten cells of characteristic shape, and starch grains smaller than those of wheat.

As you descend the ladder, there is *Keasbey & Mattison's Infant's Food.* No gluten cells; consists of grape sugar and dextrine, and claims to contain alkaline phosphates.

Mother's Breast-Milk Substitute is better than its ignorant advertisements; it contains gluten cells, bundles of wheat starch, barley starch, and gluten granules.

Imperial granum, the salvator for invalids and the aged, an incomparable aliment for the growth and protection of infants and children, a superior nutriment in continued fevers, and a reliable remedial agent in all diseases of the stomach and intestines; that which makes strong bone and muscle; that which makes good flesh and blood; that which is easy of digestion, never constipating; that which is kind and friendly to the brain; and that which acts as a preventive of those intestinal disorders incidental to childhood—Imperial granum food, which claims that the starch, impurities, and soluble matter are effectually excluded, and that the gluten only is retained, *shows no gluten cells under the microscope,* and is no better than it should be, no better than common flour, which, when fine and white, is deprived of three-fourths of its gluten, and no better than *Savory & Moore's Food,* which is also like common flour. (E. Cutter.)

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Ridge's Food is advertised as "a perfect food for infants." Ephraim Cutter tells you how perfect a food it is. It contains the beard of wheat, wheat starch mass, starch bundles apparently of maize, caked mass of starch which does not polarize light, starch grains, starch granules, and small gluten granules. And he adds: "the proprietors must add gluten cells, at least in the proportion found in wheat or maize, to bring the product up to the standard of wheat flour."

Crosby's Brain and Nerve Food, which claims to be composed of vitalized phosphates from ox-brain and wheat-germ, consists almost exclusively of starch. There are no characteristic gluten cells, no nerve-fibre, no axis cylinder fibre, no ganglion, nor multipolar cell. The advertisement claims that the brain is that of the ox, but the label states that the brain is that of the fish. Label advertises 730 parts of starch in 1000, claims some gluten; if this exists, it is the granular gluten of common flour. There are 270 parts of so-called vitalized salts asserted to be in this food; that is, salts in connection with the organic substances named. If this *be so*, *all the albuminoids in all the foods* in the markets are vitalized, also. There is but little gluten, if any, in this food. (E. Cutter.)

Blanchard's Glutena, 90 per cent. of starch, 10 of gluten, the reverse, exactly, of the claim made for the food.

Blair's Wheat-food, abundance of starch, no gluten.

Redmond's Cerealine, starch, very little gluten.

Durkee's Glutena, wheat, almost exclusively starch.

Farwell's Gluten Flour is advertised as "gluten left behind after the starch is blown out," contains starch, almost no gluten.

Victor's Baby Food, is *said* to "resemble mother's milk closely," and *is* like cracker and biscuit ground up.

Taylor Brothers' Pure Bermuda Arrow-root consists of *potato starch*, with an occasional addition of arrow-root.

Hubbell's Prepared Wheat, almost exclusively of starch.

No gluten is contained in *New York Food Company's* cold blast flour, barley-flour, buckwheat-flour, India wheat flour, Lost Nation wheat flour, Common Minnesota flour, Hazleton flour, Puritan flour, Patapsco flour, Underwood flour, fine granulated wheat flour.

Gluten Flour, *New York Health Food Company*, is common flour. The most superficial examination exhibits starch in abundance.

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After all this, with all my heart I assent to E. S. Gaillard's editorial remarks, which are as follows:

"It is almost criminal that such great questions, affecting the health, and therefore the happiness and wealth of a nation, should be left to the ignorance of the miller and the baker; to the foolish customs of society, to the equally foolish test of the mere appearance of bread, and to the fashionable restaurants and hotels. Manufacturers of foods for the sick, and, above all, for infants, should be held to the strictest accountability. It is the highest duty of the physician to learn the facts in regard to meal foods, and to use his information for the benefit not only of the sick, but of the whole community."

And experience shows, that as the committee report referred to expressed it last year, the community insists, with the utmost pertinacity, upon giving their babies, as soon as weaning times arrives, or before, such articles of food as they know nothing about. When an adult sits down to a meal and finds placed before him articles of food with which he is not familiar, he makes inquiries in regard to such articles before eating them. The baby, however, is credulously fed upon things with which the child, father, mother, or doctor has not the least familiarity; all of these foods which are sold in large quantities have a composition which is unknown to the public. When a manufacturer designs to say anything about his merchandise, it is to the effect that the food offered is the best in the market, that it is the proper thing and only thing for children and invalids of all ages, that the relation of the albuminous substances to carbo-hydrates is exactly correct, and that a package costs a certain amount of money. In regard to this subject the public appear to be smitten with absolute blindness. They insist upon forgetting that the man who offers for sale, and advertises at a very heavy expense, does so, as society is constituted, for his pecuniary advantage solely. To say that when the article offered is not good it will find no market, is deceiving yourselves, experimenting on your baby, relying on the character of a single man or corporation, on the honesty or intelligence of the manufacturer's chemist, or his superintendent, or his workmen, on the nature and condition of the elements used in the composition of the article, and on ever so many influences, which can work before the manufactured article gets into the hands of the consumer. Why the sellers and advertisers of unknown compounds should be more

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trusted than those who raise and sell a simple article of food, such as milk, which is constantly adulterated, can hardly be perceived. Is it necessary to say that the factory furnace is lighted more in the interest of the proprietor than for the benefit of the public?

Still in regard to the growing evil, which has assumed vast proportions, the profession is at fault, to a certain extent. There are but few but are aware of the inexpediency and sometimes danger attending the exclusive feeding of cow's milk, and look for substitutes. Examples of infants thriving on almost any food are numerous; the public taste runs in the direction of the unknown; thus the responsibility of advice or assent is but a slight one; many of the foods in the market come in a pleasant form and convenient for use; thus the food-business firm certainly thrives. Professional men have become used to look upon the sale of patented foods as something quite unobjectionable. Those imbued with the strictest sense of ethics, who would not patent an invention, nor tolerate the fellowship of a professional man who does so, who frown upon patented medicines, because they are unknown and unknowable compounds, who object to reducing medical science to a mercenary standpoint, these very men forget their habits and principles when the question of patent-right and secrecy comes up in regard to patent foods. If I add, that many of the scientific journals of Europe, particularly those in Germany, dedicated to the study of children's diseases, are frequently used for the purpose of discussing the merits and effects of some new infant foods, it is only to show to what extent the evil has grown.

No profound thinking is required to appreciate the fact that a great many of the articles offered for sale are unmitigated frauds; and that a few are available compositions. But the very fact that they are compositions, that everything organic may spoil, that every compound depends on too many circumstances which are apt to interfere with its uniform condition, and that when you rely on a compound, you rely at the same time on a proprietor, his foreman, his workman, his chemist, you feel that you are easily deceived or disappointed. Besides, for an article, the constituents of which you can purchase at a low price, you are taxed to an inordinate extent.

And why all this? Because cow's milk is found to be de-

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fective, when compared with mother's milk. These defects I have pointed out. It contains too much fat, and too much caseine, the latter of abnormal condition. Instead, however, of correcting the faults of milk, the latter is simply superseded and exchanged for something else. Is potato starch or even wheat, more similar to mother's milk, than is that of the cow? Now the proportions of fat and caseine can be regulated by the addition of water; but dilution is not the only function of the water added to the milk; the digestibility of the latter is also increased.

When albuminous material is subjected to artificial digestion with pepsin, and the process ceases, it recommences when more water is added. When the amount of water in the mixture is large, digestion will take place at a lower temperature than without it. Many digestive disorders in the living are due to lack of water, particularly in infants, who seldom or never are supplied with it in addition to what they obtain in their regular food. Infants who are apt to perspire much, either well or rachitic, who are kept in warm beds most of the time, who are exposed to summer heat, and lose much moisture through their skin, ought to be offered water a great many times in the course of the day. Particularly fat infants, who are mostly developing a rachitic or scrofulous disposition, ought to drink plenty of water. It accelerates tissue changes, and, therefore, animals which are to be fattened are habitually deprived of water. The rule then holds good in infant alimentation, that food, whatever it be, shall be given in considerable dilution.

But in the face of all the advantages water has, it is by itself not the proper diluent for the *caseine of cow's* milk. Some admixture must be found which is apt to overcome the dense coagulations of caseine referred to before. The particles of caseine must not be permitted to remain in close juxtaposition, but separated from each other to such an extent that coagulation in the stomach will take place in small loose flakes of the kind presented by curdling mother's milk. This object is accomplished by farinaceous substances, without regard to their large or small percentage of starch; also by gum arabic, and gelatine. Of the farinaceous substances, I have but two to recommend, barley and oatmeal. And for good reasons. The starch they contain is more easily dissolved and trans-

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formed by saliva than that found in wheat, which is the stock in trade of the infant-food manufacturers. And, moreover, there is less of it in them than in wheat.

The barley and oat-meal are the two substances I mostly employ, as their chemical constituents are nearly alike, with the exception of a large portion of fat in oat-meal, which is not found in the barley. Barley-water, or thinned and sweetened oat-meal gruel, may be given to the child even at the breast. The indications for the use of one or the other lie in the condition of the infant. Where there is a decided tendency to constipation, I prefer oat-meal; where there is no such tendency, as usual, or perhaps even a tendency of the bowels to be loose, I employ barley. The "prepared" barley is a good preparation for older children only, for the whiter it is the larger is the percentage of starch. It is safest, as no mistake or deception can then take place, for every mother to grind the whole barley in a common coffee-grinder of her own. The younger the baby the more advisable does it become to boil the whole barley for hours, to secure the contents of the bran. A teaspoonful of either is boiled in from five to six ounces of water, with some salt, for twelve or fifteen minutes, the decoction to be quite thin for very young infants, thicker for later months, and then strained through a linen cloth. Infants of four or six months are to have equal parts of this decoction (which ought to be made fresh for every meal), and of boiled cow's milk; some sugar besides. At an early age, the thin decoction, at a later, the milk ought to prevail in the mixture, which ought to be given at a temperature of 80–90° F. The newly-born, which has to wait some days for his spring to open for him, is best fed with a mixture of from four to (in summer) six parts of thin barley water, and one part of boiled milk. A baby of two months will take the same mixture in the proportion of from two to three to one.

I beg leave to quote a single author. Biedert, a conscientious worker, the author of competent contributions to medical science, and particularly to infant hygiene, himself the inventor of a cream mixture for the use of well and sick infants, expresses himself in the following manner in the very circular accompanying his preparations: "The first demand on a method of nourishing infants must be this—that the nutriment is tolerated by all infants, including the feeble and sick,

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in a manner similar to mother's milk. Now I have found that a food coming up to this requirement, must not contain more than one per cent. of caseine. Accordingly, cow's milk must be diluted with an indifferent thin decoction (oat-meal or barley.) In the beginning, the dilution must be in the proportion of 1 to 3 or 4; this admixture must be gradually reduced. This is the very mixture which surpasses all compounds thus far recommended, and all the artificial preparations." And still in the face of this testimonial, than which I do not wish a more positive one, he invents a cream mixture.

Though my remarks must necessarily draw to an end, I must not close without at least *one additional word* in regard to another constituent of infant food. Beside sugar, which is required both by taste and physiological necessities, the addition of common table-salt in moderate quantities both to cow's milk and to farinaceous substances is advisable.

The addition of chloride of sodium to the food is the more important the more the milk is mixed with a vegetable decoction. Carnivorous animals crave no salt; herbivorous, however, a great deal, although in their food the *absolute* amount of chlorine and sodium is as large as in that of the former. They are easily drawn by hunters into fields and woods strewn with salt; and the instinct of mankind has early taught how to add more salt to herbaceous than to animal food.

We find that the craving for salt grows in proportion to the amount of potassium salts contained in the food. In that of herbivores there is twice or even four times as much potassium compared with its chloride of sodium as in that of carnivores; potatoes, with their large amount of potassium, combined with chlorine and phosphoric and citric (pomic) acids, necessitate the addition of large quantities of chloride of sodium. In the food of carnivores, however, who eat whole animals, one equivalent of potassium is nearly balanced by one of sodium and one of chlorine.

Potassium salts and sodium salts both exist in the blood, the former principally in the blood corpuscles, the latter entirely in the serum or watery part of the blood. There is chloride of potassium in both corpuscles and serum, but phosphate of potassium in the corpuscles alone. Now if there should ever be in the blood more phosphate of potassium than can be taken up by the corpuscles, it will be immediately decom-

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posed by the chloride of sodium in the serum—chloride of potassium and phosphate of sodium are formed, and these are both rapidly eliminated by the kidneys, and pass away in the urine. By this means, chloride of sodium is carried away, and must be replaced: in other words, vegetable food requires the addition of a great deal of salt. The substitution of cow's milk for woman's milk necessitates the addition of salt, for a similar reason; for while 1000 parts of human milk contain only 0.70 chloride of potassium, 1000 parts of cow's milk contain 1.30.

There may be infants—I have been told of more cases than I have seen myself—who do not bear barley. Others may not bear oat-meal. If so, or if for some reason or other it is wise or whim to discontinue them, it must not be forgotten that, though feeding a breastless child *without* cow's milk, appears preposterous, feeding with cow's milk *alone* is dangerous. I do not permit it. I want an admixture at all events capable of diluting, as it were, the caseine. For that purpose, and for that alone, I formerly recommended gum arabic or gelatine. However, our knowledge of these substances has since improved. Prof. Uffelmann, in Rostock, had a little patient, otherwise healthy, who carried a gastric fistula. Through a large opening in the abdominal and stomach wall, he experimented on the child's digestion. Unmistakable and numerous observations taught him that both arabic gum and gelatine are not only emollient and soothing, but directly nutritious. Thus the list of those substances which may be added to boiled cow's milk, to make it available as the regular food for infants, is by no means small. They all come up to the requirements we look for in such substances. They must be perfectly simple and recognizable. They must be accessible, and for sale everywhere. The mode of preparing them must be perfectly simple and easy. They must be cheap.

They must be as nearly the substitute of mother's milk as an imitation can be like the original. They must be alike for throne and den, for Fifth Avenue and Mulberry Street, for the wet-nurses for the throne and the Fifth Avenue come also from the dens and from Mulberry Street. It is not wise to forget that nature is republican in principle and democratic in practice. If too often there be no equality before a court of so-called justice, *there is* equality before that of physiological law.

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COMMUNICATIONS.

I.—Hints and Suggestions for Reform in Medical Education.

By Frederic R. Sturgis, M. D., Professor of Venereal Diseases in the Medical Department of the University of the City of New York, Visiting Surgeon to the Charity Hospital, B. I., &c., &c.

It has been said with much truth that between having a poor physician and doing nothing at all in sickness there is but small choice, but between the good and the bad physician there is a vast difference;—the difference between life and death!

Presuming this to be true, how much then it behooves a community to see that the guardians of its health are well educated and trained for their professional work, but upon what subject, alas! does more gross ignorance exist in the public mind.

So low, indeed, does the public rate its medical men, that apothecaries, nay worse, the veriest impostors who have received no education of any kind, who practice under a fraudulent diploma, perhaps under none at all, are considered as trustworthy and as competent to deal with important questions of health as the physician who has spent money and time in acquiring a decent and proper knowledge of medicine. Why is this so?

Is it because people do not want proper medical treatment, or, perchance, because they are so healthy as not to need medicine?

There probably is no country in the world where so much indiscriminate drugging is indulged in as in the United States, and where so much money is made from patent or proprietary medicines, hence it cannot be that people think they are well enough to get on without medicine. And to say that when

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they have the power of obtaining good medical advice they will still adhere to the bad, is to make Americans out as greater fools than they really are.

Are medical men then to blame for this condition of things: is it because they do not respect themselves that the public fail to respect them? Perhaps so, and certainly of all things most calculated to produce this condition of mind in the public is the way in which medical diplomas can be obtained throughout the United States. The exposé of the Philadelphia Medical Schools, controlled by the notorious "Dean Buchanan," who is now for his country's good happily under lock and key, shows that purchase is one of the methods of acquiring a permission to practice throughout the country, and the diplomas of these schools!! are legally entitled to the same privileges and to the same respect as the diplomas of those schools which require and exact a proper knowledge of medicine.

Besides purchase, which it is hoped and believed is not of *very* extended proportions, the curriculum of education required at the schools and the amount of preliminary education exacted, is sadly and, but for the gravity of the situation, absurdly deficient. In most of the schools no preliminary examination (I had almost said no preliminary education) is required, and the man fresh from the plough or the stable is turned in neck and crop to struggle with the Latin and Greek words incident to a medical education and to cram himself as full as he can in order to pass his examination for the doctorate of medicine in two years time. The only wonder is that the student gets through at all, and even if he does he shows through life the result of his faulty education every time he speaks or writes. It may be urged that a knowledge of Latin, Greek and the humanities, as they used to be called, are not essential to the making of a good doctor; that many good physicians exist who have not had a liberal education. I do not admit the truth of this argument. I have noticed in my intercourse with physicians that the uneducated one, although competent to do a routine work of his profession as well, perhaps, as his educated brother, is incompetent to deal with its intricate problems; he is wofully deficient in the advanced principles and ideas of scientific medicine, and when it comes to paying the debt which Lord Bacon held every man

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owed to his profession he is an arrant defaulter. Besides the mere educational aspect of the case, a liberal training has an effect upon the manners and customs of society, and by no class should good manners and the amenities of polite society be more rigorously observed than by the physician.

"Ingenuas didicisse fideliter artes,"
"Emollit mores nec sinit esse feros,"

is as true to-day as when written by the Roman poet. That the medical profession has been considered wanting in this respect can be gathered from what President Eliot of Harvard College writes about physicians and medical students in his report for 1879—1880:

....."An American physician or surgeon may be and often is a coarse and uncultivated person, devoid of intellectual interest outside of his calling, and quite unable to either speak or write his mother's tongue with accuracy. What wonder if, under the circumstances, the degree of Doctor of Medicine has not heretofore been universally accepted as a pass-port to refined society? It is notorious that medical students have been as a rule a rougher class of young men than other professional students of similar age. In this University, until the reformation of the school in 1870—'71, the medical students were noticeably inferior in bearing, manners, and discipline to the students of other departments; they are now indistinguishable from other students."

Can American physicians or surgeons read this without experiencing a feeling of shame and indignation that such language can be held against the profession to which they belong, and held, remember, not by some irresponsible writer but by the official head of one of the oldest seats of learning in the United States, and worse than all so far acknowledged to be true that one of the "*respectable*" newspapers of New York City not only endorses the statement but adds thereto some fresh abuse of its own. Low, indeeed, has the medical profession got when paragraphs, like the following, are printed in the daily press, without fear of contradiction:

....."To say that medical students are rough but faintly expresses the facts, for they are also ignorant and often grossly immoral. Exclusive of the bogus institutions like the late college in Philadelphia the only requisites for the degree of M. D. in many of our colleges are, sufficient money to pay the fees and a tolerably good memory, even the latter is of rather secondary importance" and

"Without even a common school education they (physicians) aspire to a social position for which they are totally unfitted by nature or experience."

This is seeing ourselves as others see us with a vengeance.

What is the remedy for such a deplorable condition of affairs, or shall we acknowledge at once that it is incurable? Quite the contrary, it is not incurable, but under the existing condition of things there is little, if any hope of reformation.

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And why should this be so? *Simply because nearly all the American medical schools of the present day are private business enterprises* and as such must be conducted to pay running expenses at least, if nothing more, and as money is needed for medical education just as much as for other things, an attractive bait must be set to lure money from the pockets of would-be-physicians. The first and most powerful bait is the right to earn one's own living which each diploma carries with it, and this right is not confined to the State where the student is graduated, but is valid through the entire country. The majority of young medical students are poor, and it is an object for them to obtain their license to practice as speedily as they can, hence the school which will turn them out the quickest is the one for their money. The foolish American notion that the biggest thing must be the best also has its votaries in medicine, and the school which has the largest number of students is paraded as the school *par excellence*, and bids for the fees, if not for the suffrages, of the student.

Neither can be blamed. It is human nature to act as both the schools and the students do: the one is bound to live, the other to get all they can at the minimum expenditure of time and money. The next step to this is the sale of diplomas, pure and simple, without any requirements, and the extent of this traffic was rendered apparent by the Buchanan exposé in Philadelphia, and the Lord only knows how much is done to-day of which there is no public knowledge.

Another defect is the careless and slip-shod way in which charters can be obtained for educational and other purposes. All that is requisite in this State is that not less than "five persons of full age, citizens of the United States, a majority of whom shall be citizens of and residents within this State * * * * * *" may make, sign and acknowledge before any person authorized to take the acknowledgment of deeds in this State, and file in the office of the Secretary of the State and also in the office of the clerk of the county, in which the business of such society is to be conducted, certificates in writing, in which shall be stated the name or title by which such society shall be known in law, the particular business and objects of such society, the number of trustees, directors or managers of such society for the first year of its existence," etc. There is nothing making the educational

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candidate for a charter show just cause for its existence, nor anything binding it to give good and proper instruction, hence as soon as its charter is obtained it may do as it pleases, teach or not, as it likes, or if it prefers it may sell its diplomas.

Another hinderance to a good medical education arises out of the dependence of the medical schools upon the students' fees. With but one exception perhaps, no medical school in this country can say to a student, we do not care about your fee, your acquirements are not up to our standard, we will not accept you as a student. Most medical schools saying that would at once lose their students and in this connection the friends of educational reform in medicine are invited to ponder the action of the Bellevue Hospital Medical College.

In 1879, this school amid loud trumpeting and posing before the medical public as the friends of educational reform in medicine, announced that after the regular term of 1879—'80 the preliminary term should be abolished and the regular winter course be prolonged to six months instead of three, that a preliminary examination should be held prior to matriculation; that attendance upon three winter terms should be obligatory, that the students should be obliged to pass annual examinations independent of the final one for the degree of M. D., and that the course of study should be a graded one. Amen, said the friends of reform, this is an excellent beginning; the reputation and position of the men connected with the Faculty of the Bellevue Hospital Medical College is a guarantee, if not of success, at least of a fair and thorough trial of this new and desirable system; we wish them God's speed. What has the result been? Six months after the trial of the new method the faculty issued another circular announcing that "after the present session of 1880—'81, attendance upon a third session will be optional and not obligatory," that the school will return to the two years rule and abandon the attempt to give an extended curriculum, because "to persist in the requirement of attendance during these courses will be to incur a risk as regards the interest of the college, which they do not feel justified in assuming," and furthermore, because "the profession is not prepared to sustain the movement." Was ever conclusion more lame and impotent; was ever retrograde movement more hasty and indecent? After all their pretensions in behalf of reform in medical education, these worthy and

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excellent teachers are frightened at the result; they are losing too much money; they cannot stand the pressure, and they execute their summersault into their old place, amid the jeers of both friend and foe. Well may the friends of advance in medical education exclaim: we want no assistance against our foes, we can manage them, but God save us from our friends.

It would be very desirable instead of leaving the teachers and professors of the schools to find their reward for the expenditure of their time and knowledge in the advertising they receive in the college circulars and by personal contact with the students, to have each man paid a salary sufficiently large to enable him to devote his time exclusively to teaching and to keeping abreast of the times, and that can only be done by inducing the wealthy friends of education to endow the chairs of the various branches taught and thus render the schools of medicine independent of their students' fees, and also to take them out of the position of private business enterprises; by that I mean making them really parts of colleges or universities. Of the three principal schools of medicine in the city of New York, two are nominally attached to a college or university, viz: the College of Physicians and Surgeons to Columbia College and the medical department of the University of the city of New York to the institution the name of which it bears. And yet the connection is only nominal; both institutions have governing faculties separate from the governing faculties of the colleges they belong to, and borrow the respective and respected presidents to act as figure heads at their annual commencements. Indeed, one of the two, the University Medical school was built and is owned by the medical faculty, and does not properly belong to the University, hence this faculty certainly has some show of reason in conducting its affairs to please itself.

In this connection the following remarks of President Eliot of Harvard (Annual Reports of the President and Treasuret of Harvard College 1880—'81,) will repay careful perusal as showing the reason why medical schools are left to struggle by themselves, and why they are regarded by the promoters and friends of education with so much suspicion. Let me say that my reflections were written several months before President Eliot's report was made:

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"The next thing which needs to be done for the Medical School is to procure scholarship funds and endowments for its professorships, or a large permanent fund, the income of which shall be applicable to salaries. So long as medical schools are conducted as private ventures for the benefit of a few physicians and surgeons who have united to form a corporation or a faculty, the community ought not to endow them; for it is contrary to the best interests of the public that medical education should be conducted in that way. The experience of the past hundred years in this country proves that such medical schools will not be endowed. While several millions of dollars are yearly devoted to education in arts and in theology by intelligent and public-spirited men and women, hardly anything is given for education in medicine; because almost all American medical schools are organized and carried on as commercial adventures. In 1871 the Harvard Medical School ceased to be in any sense a private venture, and became a constituent department of the University, devoted, like the other departments, to the advancement of science and learning, and to the amelioration of the conditions of human life. Since that year it has received by gift and bequest $270,000; but this sum, though considerable, is not one third of the endowment which it urgently needs. The objects of endowment in medical education are precisely the same as in other departments of education, namely, to provide permanent means of securing the most competent persons for its professional chairs, of helping poor students of rare capacity, and of advancing knowlege by new researches. It is the primary object of medical science and art to defend and improve the life that now is,—the life of the individual, of the family, of the society; but since it is impossible to separate physical from mental and moral well-being, the domain of medical science is really co-extensive with human nature. Whatever notions influence benevolent persons to endow institutions which teach the humanities or theology, should also avail for the endowment of medical education. The seed and the fruit, the planting and the harvesting, may be different in kind; but these various cultures all have in view a common end, namely, the improvement of man's high estate."

If the wealthy public can be persuaded that medical institutions cannot live on air, but need pecuniary support to carry on good work, the better it will be for the public as well as for the science of medicine. Branches can be taught, such as public hygiene, medical jurisprudence and the like which have now to be passed over in silence or else very superficially taught, and another most important advance could be made. The schools could then be relieved of the necessity of making their diplomas licenses to practice, which right ought never to have been given to them. The schools ought to be places of instruction, nothing else, and the institution which will give the best instruction will *ceteris paribus* receive the most students. But it may be urged that by such action the students will be driven to schools whose diplomas mean licenses to practise, and that it will injure the schools here. That it will kill weak and inefficient schools I believe and hope; there is no excuse for their existence, but no *good* medical school will be permanently injured thereby, on the contrary it would be benefit-

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ed, for New York from its vast size and its ample clinical material, not one-tenth part of which is utilized, will with ordinary care and attention always be the center for medical teaching on the Atlantic seaboard of this country.

And as proof of the statement that no permanent injury will accrue to any good school, I invite attention to the following figures from Harvard College:

In September 1871 the medical department put into practice a three years' course of study, instead of two, a graded system of instruction, annual examinations on the studies of the year, and to obtain the degree of M. D., the candidate was required to pass a series of examinations both written and oral instead of the usual hasty oral one. In 1872—'73 which was the first year after the new regime, the number of medical students was 170, and I believe for a year or so after, the numbers diminished; at any rate, they did not increase. But the men of Harvard had the courage of their convictions, and did not faint by the wayside, the new policy was adhered to, and this is the report of 1880—'81. Number of students in the school was 251. Perhaps it may be urged that if a longer attendance is made obligatory that but few students would attend the school; the desire to obtain their diplomas as rapidly as possible, overriding every other consideration. A student who from any cause is unable to devote at least three years at the school, to the study of medicine, should not be allowed to present himself for graduation, but waiving that for the present, does the Harvard exhibit bear out this objection? Not if the following statement of the President is correct:

"The improvement in this respect (in the length of terms of study) within nine years is extraordinary. In 1872, only five per cent. of the graduates had spent three years in the school, and but fourteen per cent. more had spent two years in the school; forty-eight per cent. of the graduates had spent only one year in the school and thirty-two per cent. more only one year and a half.* In the three years, 1878, 1879 and 1880 eighty-six per cent. of the graduates had spent three years in school, only two graduates out of one hundred and sixty-three had been in the school but one year, (and one of these men had previously been graduated at another school), and only two others but a year and a half; the rest had been in the school either two years or two years and a half."

For 1881, the following figures speak for themselves. No student in the school had studied for less than one year and a half: those (the year and a half ones) constituted only one per cent. of the total. Eighty-one per cent. had studied three

* One per cent. is unaccounted for.

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years; ten per cent., two and a half years, and six per cent., two years. Two per cent. seem to be unaccounted for. The appended table shows the steady increase in the number of terms spent at the school by graduates from 1872 to 1881.

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881
Spent six terms	3 5 p. c.	8	22	14 47 p. c.	25 69 p. c.	40 65 p. c.	41 85 p. c.	62 88 p. c.	39 86 p. c.	49 81 p. c.
Spent five terms	0	3	2	7	5 13 p. c.	9	4	2 2 p. c.	1 2 p. c.	6 10 p. c.
Spent four terms	8 14 p. c.	8	6	6	4 11 p. c.	8	3	3 4 p. c.	4 8 p. c.	4 6 p. c.
Spent three terms	18 32 p. c.	15	5	0	2 5 p. c.	1	0	2 2 p. c.	0	1 1 p. c.
Spent two terms	27 48 p. c.	7	3	3 10 p. c.	0	3	0	1 1 p. c.	1 2 p. c.	0
Total graduated	56	41	38	30	36	61	48	70	45	60

Regarding the question of conferring the right to practice medicine in this State, I believe it to be of special importance that the State should be allowed some voice in the matter of the qualifications of its medical practitioners. No diploma, no matter from whence emanating, should confer the right to practice without a license or authority from a State Board of Examiners, and as there would be no money in such a board politics need not enter into its composition or working.

"Vacuus viator ante latronem cantabit."

This power might very properly be vested in the Board of Regents of the University of the State of New York in accordance with the law passed May 16, 1872, chap. 746, R. S., and amended July 26, 1881, chap. 679, laws of 1881, with the co-operation if so desired, of the State Medical Society.

Before this tribunal *all* the candidates for the right to practice medicine or surgery in the State of New York must come for authority and license so to do, no matter at what school he or she may have studied. As regards the different sects in medicine there is but one branch, to wit of therapeutics, where there is any difference of opinion; in the branches of anatomy, physiology, botany, chemistry, pathology, etc., etc., they are one; these are equally necessary and are the same for the homœopath and eclectic as for the regular pratitioner. Where this

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difference of opinion exists the candidate could elect, as already provided for in the amendment, under which school he ranges himself, and could be examined by the examiner for that branch of such or such a school.

The points then to be urged by the friends of advanced medical education are these, viz:

1.—The absolute incorporation of medical schools with some charterted college or university; make the governing bodies of both the same.
2.—Endow the school liberally for educational purposes and make it independent of its students' fees.
3.—Separate the right to practice from the diploma. This latter then, should be a token of proficiency in study and knowledge and its possession from some school in good legal and professional standing might be made obligatory before a candidate can present himself for authority to practice in the State.

With the hope that I have not exhausted my hearers' patience I cannot better close this paper than by quoting from Mr. Eliot's report the two following requisites of a good medical school, "first, that the number of clinical instructors should be as large as the community can well supply; and secondly, that the university should be more concerned to have a very good school of medicine than a very large one.

Discussion.

DR D. B. ST. JOHN ROOSA, of New York: Mr. President—This is a subject that every man here, who knows anything whatever of papers I have published, knows is one in which I have a personal interest, and that may be an apology which I offer for occupying a few moments in giving a little fuller explanation of some of the points brought forward in the paper by Dr Sturgis. The gentleman stated that while the Medical College belonged nominally to the University of the City of New York, it was not owned by the council of that university but by the medical faculty. That is quite true; and it is also true of the College of Physicians and Surgeons, and the Bellevue Hospital Medical College. It is true of all the medical colleges in New York State. The College of Physicians and Surgeons has an additional embarrassment, as it seems to me, in the fact that it is responsible *first*, to a board of trustees of its own, and *second*, to the trustees of Columbia College. The Faculty of the Medical Department of the University of the City of New York are responsible to only a certain extent, to the Council of that university, and therefore that college in my opinion, is in the best way prepared to aid in the alleviation of the present evil state of things in our city.

I will also allude to another interesting fact, and it is that the members of the faculty of one of the best medical colleges in this country, I will not mention the college by name, but simply say that some of the most prominent members of that

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faculty have absolutely declined to take any steps which will make closer the affiliation of their college with the institution to which they are nominally attached.

I may also state another fact, and it is that the medical faculty of one of our city schools at one time appealed to the council of a certain university to take their college under its care, and were ready to promise all sorts of good things if to them the protection of that institution was extended. But the state of the lay mind is at such a low ebb with regard to medical education, that there was no layman in that council into whose head it entered to give aid to a medical school, for the reason that he regarded such organizations as private concerns and that they must always be private affairs, and these are some of the obstacles we have had to contend with in the City of New York, in endeavors to reorganize the medical colleges. I fully appreciate the admirable paper read by Dr. Sturgis for it presents some of the evils of the present system although, perhaps, it does not hold out much hope for the future. For even if we discuss the practical means and measures for correcting this condition of affairs, with laymen, they will as yet give us no pecuniary aid. But we should never rest until every medical college in this State is under the control of a body of independent men, whether of the State or the Council of the University to which it belongs.

DR. MAURICE PERKINS, of Schenectady: Mr. President—I think this matter is largely in the hands of the medical profession. Every young man who goes to a medical college goes from a doctor's office, and if the student's preceptor would say to him, 'you should have a little more education before entering upon the study of your profession, you should spend two, three or four years in college before beginning your work in a medical school,' I think the condition of things would be very much changed. I must say, however, that I think the public is fully as much at fault as is the profession itself. For it is the public that supports the doctor, and the people seem fully as much inclined to employ a poorly, as a well-educated man. If we can elevate the standard of medical education among the people of the State, it will react upon our colleges and give the profession more thoroughly educated members.

[Remarks by Dr. E. M. Moore, are here omitted, at his request.]

DR. H. G. PETTARD, of New York: Mr. President—It seems to me that two questions have been raised, 1st, as to the desirability of such a Board of Examiners, and 2d, the most desirable manner of constituting it. Upon the first point I have nothing to offer. Upon the second point, Dr. Moore has brought forward a plan which has in view the constituting of a board elected by this Society.

DR MOORE: Oh no! Not at all. The board is to be composed of men selected by the medical colleges, and this Society to have one representative in that board who would be entitled to one vote, the Society acting as one college.

DR. PETTARD: That would involve the appointment of a board which would pass upon the qualifications simply of graduates of regular colleges. That would not prevent the appointment and support of a second board which would pass upon the qualifications of Homœopathic graduates, and another for Eclectic graduates. Now, if these three boards were appointed, we should reach just that state of affairs that existed prior to the abolition of the Boards of Censors in County Medical Societies. Until within a few years, by the plan of Boards of Censors giving licenses, the Homœopaths and Eclectics could grant licenses which, so far as legality was concerned were just as good as those obtained in our best medical schools. And, what was the effect? A man might go before one County Society, and failing there, go

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before another Board of Censors in another county, by which he would be admitted to the practice of medicine. So if we were to have these Boards of Examiners, one for the regular profession, one for Homœopaths, and another for the Eclectics, we should have boards with different views regarding the qualifications necessary in order to be entitled to a degree of doctor in medicine. I think that the plan proposed in the paper by Dr. Sturgis, which looks to the formation of a mixed board, is preferable to three separate boards, under three separate kinds of control. In a mixed board the members would watch each other to see that the qualifications were not lowered or made unequal for any of the candidates. I think that any man to be entitled to a degree of doctor of medicine should be put through as severe an examination as are the students in any of the regular schools. But by Dr. Moore's plan the regular student would be subjected to a severe examination, and the Homœopaths or Eclectics would not be.

DR. STURGIS: Mr. President—With the utmost respect for the views enunciated by Dr. Moore, I beg leave to differ from them. It is easy enough for optimists to say that physicians have been lampooned from time immemorial, and will continue to be, but the additional fact exists that the lampooning was given because it was deserved. It will not do to fold our hands and say that it was done, and will continue to be done, because of the ingratitude which the laity have towards the medical profession.

There is one point in discussing this question which we must not overlook. And that is that legally qualified irregular practitioners are, in the eye of the law, as good as we are, and the moment we forget that and attempt to make a State Board for the examination of candidates in one division in medicine only, we leave these irregulars entirely free, and tie our own hands. By making a mixed board the charlatans would be forced to prove their qualifications to practice, but if it be constituted so as to include merely regulars, we have left the most dangerous portion of the profession to do whatever they wish.

I would especially urge in the beginning, if a State Board is established, to have it give these men all their legal rights, take them and give them a fair representation, and if they show better results than we show, it will be of great advantage for us to know it. If we legislate for the regular profession alone, we shall fail, and I would direct attention to the fact that this law is intended to give more control over medical charlatans that any law which has yet been enacted.

II.—NOTE ON CLINICAL THERMOMETERS.

BY E. R. SQUIBB, M. D., BROOKLYN, N. Y.

Thermometers in general should be, to a moderate degree at least, instruments of precision, but that they are not so is becoming pretty generally known. Clinical thermometers are perhaps quite as untrustworthy as any, while from their short range their errors are more difficult to detect, and from their important uses these errors become serious defects. A good thermometer is a very valuable instrument, and is rather rare among the many thousands which are annually sold, but a

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poor one, like a false weight, is an abomination and a fraud, and, unfortunately, the appearance of the instrument is no indication of its true value, because the skill which finishes them well is of a kind very much cheaper and easier to get than that which adjusts their accuracy. Thousands of very good-looking clinical thermometers are annually sold by the makers at one dollar to one dollar and a half each; but he who considers the care, skill, time and labor necessary to the principles involved in a fairly good thermometer, and who yet buys one of these, is simply buying his own folly and shortsightedness, and cheats himself quite as much as he is cheated by the seller.

It would, however, be almost equally a mistake to buy clinical thermometers made with the skill and care requisite to accurate standard thermometers, because the sphere of error in the application and uses of clinical thermometers is so much greater than in the use of very fine instruments that it would be like paying for an assay balance on which to weigh flour or sugar. The aim should be to get an instrument accurate to within the sphere of other unavoidable errors incident to its uses. Paying for a greater degree of accuracy than this is only so much money wasted. Properly accurate thermometers are always to be had at prices which pretty closely correspond to their true value, but they never can be had at the prices at which the makers are obliged to sell a large proportion of the instruments which are sold and in use, simply because the prices are below the cost of the time, skill and labor essential to the construction of a properly accurate instrument. Prices paid to dealers, however, are not always indications of either true value or of the prices realized by makers. A thermometer good-looking enough to be bought cheaply and sold dearly is the primary object of many dealers. It becomes very necessary to know how to select a good thermometer independently of its appearance and price, and to aid in such knowledge is the object of this note.

Beside the errors which arise from imperfect tubes, a low degree of skill, and the use of incorrect standards in making thermometers, there is one very important source of large error that is not so generally known, namely, the contraction of the glass of which the bulb is made.

It was long ago shown that glass undergoes a process of

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contraction after having been melted, which, from being comparatively rapid at first, becomes slower during many years; and that glasses of different composition undergo different degrees of contraction, and at different rates. Regnault's observations (given from memory) showed that the contraction noticeable by very careful experiments continued for six years or more, but that after the first three or four years it was very slight and very slow, hardly appreciable to the finest measurements, and therefore not at all important to any but the very finest standard instruments.

It was also shown that if during the course of this contraction, or at any time after it had been completed, the glass was re-heated, even to a moderate degree, and far short of melting, it again expanded to an extent proportionate to the heating; but that after re-heating it contracted much more rapidly than at first, and so regained the degree of contraction which might have required two years to attain, within a few months.

From these facts it follows that a thermometer which is graduated as soon as it is made, though made with proper care and skill, and graduated correctly from a good standard, will have its mercury column pushed up so that the readings from it will all be too high, and this error will increase through many years. This contraction, however, becomes so slight and so slow that after three years, perhaps, it could not be detected in any ordinary thermometer by any ordinary means of observation. And farther, it may be stated as being probable that during the last six months of the three years the contraction in any ordinary thermometer glass would not exceed two-tenths of a degree. Then, as this two-tenths of a degree is within the sphere of other common errors of construction and uses of clinical thermometers, it might be disregarded in view of the additional cost of eliminating this with the other equally small errors of construction and application.

Hence clinical thermometers should always be "seasoned." That is, after being made so far as heating processes are necessary, they should be put away for three years,—or at least for two years and a half, before they are graduated, because after three years, no change of practical importance will occur.

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It is probably only the makers of cheap instruments who graduate them as soon as made, and such thermometers being untrustworthy from other causes, are most so from this cause also. It may perhaps be stated,—though rather at random, as they do not tell the details of their business,—that makers who have moderate reputations to keep up, do not as a rule graduate their tubes until they have been seasoned for a year or a year and a half. But as only about one-half of the total contraction will have occurred in a year and a half, such thermometers in three years will be found to read about five-tenths of a degree too high. Hence it occurs that from this contraction alone thermometers which have remained unsold in the hands of dealers, or have remained unbroken in the hands of physicians for two years or more, are often half a degree out of the way, and always too high, while in cheap thermometers it is not uncommon to find them a degree or more out of the way.

A majority of observers will be well served if they get thermometers which are accurate to within two-tenths of a degree. But fairly close observers should not be satisfied with an error of more than one-tenth, unless the error be accurately known, and be applied as a correction to each observation made with the instrument. Of course an otherwise well-made instrument which is old enough to have reached its maximum contraction,—or say over three years old,—if its error be accurately known, and always applied, is as good as if it had no error, and the common practice of all close observers should be to get an instrument of known age and error, and keep it carefully,—not for daily use, but to compare other thermometers by, and then buy cheaper thermometers for daily use and accidental breakage. Every clinical thermometer bought by a physician should be accompanied by a certificate stating when and where it was compared. For many years, and until 1880, the only thermometers having these certificates were compared at the Royal Obsevatory at Kew Gardens, London, and the certificates of comparison with their standards were supplied by the Kew Observatory at a shilling each. These certificates gave a very great advantage to the English clinical thermometers with which they were sold; but the great demand for these thermometers caused the English makers to send them out unseasoned, though certified, and

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thus the certificate lost much of its utility, and often accidentally came to be misleading. About 1880, however, the Winchester Observatory of Yale College, at New Haven, Conn., established a thermometric bureau, and placed it under Dr. Leonard Waldo, the astronomer in charge, and now this bureau takes the place, for this country, of the Kew Observatory in England. Any physician can now send his thermometer to the Yale College Observatory and for fifty cents obtain an accurate certificate of its error throughout the scale; and should his thermometer be old enough when sent, the certificate will be good for the entire lifetime of the instrument. It should be a source of great satisfaction to all who use thermometers for any purpose that this well-known Observatory has assumed this important work, and now it will be the fault of observers if they have not corrected instruments. If the results realized in Great Britain from the Kew Observatory should be attained here from the Yale Observatory, it will not be many years before the grossly inaccurate instruments scattered all over this country, for meteorological as well as for medical uses, will be very much diminished in number. At least, if they are not, it will be the blamable fault of the observers who use them. The Yale Observatory also undertakes, for a very small consideration, to seal up packages of thermometers for makers, so that it may issue with them certificates of the age or seasoning of each thermometer.

In selecting a clinical thermometer several important points are entirely within reach of the physician who selects.

First, the index or register being shaken well down, the bulb is taken between the thumb and finger, and the ascending column of mercury carefully observed. If it rises very slowly the glass of the bulb is too thick, or the tube too large. If it rises very rapidly indeed, the glass of the bulb is too thin and the thermometer will be easily broken. This defect from thinness of glass is, however, comparatively rare, while those in which it is too thick are very common. When an instrument is found which does not rise very slowly, let it be cleansed, and then placed under the tongue, for about eight or nine minutes by the watch. Then let the temperature be read, and the bulb be at once returned to its position under the tongue for ten minutes more and again read. If the temperature has increased since the first reading, the instrument should be re-

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jected, because a thermometer which does not reach its maximum indication in nine minutes is unfit for clinical uses. It will tire out the patient, and use up a great deal of the physician's time unnecessarily. If the reading has not increased, allow it to cool for ten minutes and again place the bulb under the tongue for six minutes and again read. If now the reading is lower than it was before, then the time required to reach its maximum indication is longer than six minutes but shorter than nine, and it must be again cooled, and placed under the tongue for seven or for eight minutes according to the difference between the former readings; and in this way a fourth or a fifth trial will determine the point of maximum indication. But if the six minutes reading corresponds within one-tenth of a degree with the nine minutes reading, then it is to be again cooled and placed under the tongue for four minutes,—and so on until the time for reaching its maximum indication is established. Then in all his observations throughout the lifetime of this instrument the physician must always keep it in place for this length of time in order to get a trustworthy observation. The average of good thermometers may be given as from six to eight minutes. Those of three, four or five minutes are exceptional and rare, and are very valuable when found, if well taken care of, for they save a great deal of time. But while an eight minute thermometer may fall on the carpet either in or out of its case and only exceptionally be broken, a similar accident will be almost surely fatal to one of four minutes.

The next point in the selection is to see that the register shakes down easy enough without moving too easily. This will depend a good deal upon the method used by each individual. If the method used by thermometer makers be used, it will with much ease get any register down, and that without much risk of losing it, but some skill and practice is needed in acquiring this method, and it is not susceptible of being clearly explained. They hold the thermometer rather loosely by the extreme upper end and then give it a quick flirt or sling outward from them somewhat as if cracking a whip, the arm representing the whip-handle and the thermometer the whip-lash. The methods in almost universal use are all much inferior to this, and are too well known to need description, and the observer must select his instrument to accord with his

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own method if he does not choose to acquire a better one. If the register moves down too easily it will in all thermometers, except one variety, be liable at any time to be lost by causing it to coalesce with the body of mercury below it; and if lost, the thermometer, as a rule, is hopelessly spoiled. The register should be separated from the mercurial column below it by a distance almost inappreciable to the naked eye when the instrument is at the lower end of its scale. The thermometer with "indestructible index" is made on the principle of Phillips' maximum thermometer, namely, by a narrow contraction near the bulb. But in this case the contraction must be so much narrower than in the Phillips instrument that the mercury passes through it by jumps, and of course the whole column rises by jumps so that it does not indicate with accuracy to tenths of a Fahrenheit degree. These thermometers differ somewhat in the length of their jumps, and probably makers will improve upon them in the future, but at present they are not adapted to very close observations, though perhaps accurate enough for ordinary indiscriminate use. It may be safely said, however, in regard to the ordinary clinical thermometer that a register is never lost except by mismanagement, and such mismanagement is much more frequent with thermometers which shake down easily. To this it may be added that physicians, as a rule, are dissatisfied with instruments which do not shake down easily, and this is the reason for so many lost registers. Registers are often, if not generally, lost at the first or second shaking down, by supposing they are hard to shake down when they are not, or by using some bad method of shaking. Hence a new thermometer should be shaken down with great care until the observer knows how much force is required.

Almost all clinical thermometers are graduated to fifths of a degree, but are easily read to tenths, the only difficulty being with the shorter ones, where the marks for fifths are so close that the distortion by thickness of glass on the stem makes it difficult to hold the instrument exactly at a right angle with the line of accurate vision. Any one of these short thermometers can be easily read one or two-tenths out of the way on either side of its true indication by this distortion of the glass, and by holding the thermometer badly. A great improvement has been made of late years by Hicks, of Lon-

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don, for reading these short thermometers, or indeed for the reading of any clinical thermometer. Hicks holds a patent for making the stem of such a form that he gets the magnifying effect of a lens upon the column of mercury when the instrument is properly held. Such instruments he calls "Lens-front Thermometers." In selecting one of these, care is necessary to see that the line of graduation is so placed as to be well seen by the magnifying front. In some of Hicks' instruments when the column is brought under the graduations it is only seen edgewise, and without being magnified. For the reading that is necessary to very careful and clear observations, a five-inch or a six-inch clinical thermometer is much the best length, because it gives a much more open graduation. But four-inch is the length generally preferred, because better adapted to the pocket. Thus, probably, nine-tenths of all that are sold are four-inch. A three-inch instrument is made by some makers, but the graduation is too close to be read with a useful degree of accuracy even if a glass be used in the reading.

Finally, in selecting, the bulb should be slowly and carefully warmed by holding it near some source of heat until the mercury has slowly risen to within one or two degrees' length of the top of the capillary tube, the highest point reached being carefully noticed. If the tube above the mercury contains much air the register will be pushed down by it as the instrument cools. Such an instrument is not trustworthy. As a rule a clinical thermometer should not be bought without a certificate of either Yale or Kew Observatories, and care should be taken that the number of the certificate has not been altered, and that it agrees with the number of the thermometer with which it is sold. If the date of the certificate be more than six months past, it, with the thermometer should be sent to the Yale Observatory for a new verification, because the thermometer may have been newly made when the certificate was issued, and if so, with some varieties of glass in use, it may be a degree or more out of the way in six months. An excellent practice for any physician is to buy a good thermometer with a certificate of as old a date as he can get, and put it away for a period of three years from the date of the certificate. Then send it to Yale for a new certificate, keeping it afterwards as a standard by which to ascertain the errors of

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those which must be bought from time to time as they are broken in use. Such a thermometer is very valuable, and may do excellent duty among neighboring physicians. One of the very prominent uses of these certificates is to indicate the "calibration" of the mercury tube. If this tube be wider at some places than at others, as is commonly the case, the error of the thermometer will vary at different parts of the reading scale, because the scale is mathematically divided. These variations appear on the certificate for each five degrees, and it commonly occurs that there is a difference of one or two-tenths in each five degrees, since a practically uniform tube is rather rare even for so short a range. As these errors in tube-diameter do not change, successive certificates for the same instrument should always show the same variations. Hence it is that any one who has an old instrument with a certificate can easily compare any other instrument having a certificate, and correct all its errors by a single observation at any part of the scale. The two instruments are cleansed and the bulbs are together placed under the tongue for the maximum time of the slowest instrument, and they are then carefully read. Now, for example, if the reading of the standard instrument should be 99.1° and its error at 100° by its certificate should be "—.6°," then the true temperature would be (99.1—.6=) 98.5°. Then suppose the one to be compared with the standard read 99.3° and its error at 100° by its certificate was "—.3°," its reading if corrected by its own certificate would be (99.3—.3=)99°, but corrected by the standard it should be 98.5° and is therefore .5° too high by its certificate, and .8° too high by the standard. This would show that it had risen .5° since the date of its certificate, and that to correct its readings now .5° must be added to each one of the errors of its certificate. That is, its true reading will be at each point its former certificate error plus its new error. If its certificate read as follows:

"At 95°.....—.2°"	—.2+—.5= —.7°
"100°.....—.3°"	—.3+—.5= —.8°
"105°.....—.2°"	—.2+—.5= —.7°
"110°.....—.1°"	—.1+—.5= —.6°

then its correction by the present comparison with the standard would be as indicated by the figures at the right of the older corrections. This simply expresses the fact that

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there was a narrow place in the mercury tube somewhere about the 100° graduation, and that in consequence of this the readings, to be true, must be corrected in this way. It must be noticed that in these certificates the minus sign "—" placed before the error does not mean that the thermometer reads too low, as many physicians suppose, but, on the contrary, that it reads too high, and the error must be subtracted in order to get the true reading. This is clearly explained on each certificate, yet it does not seem to be understood. It would have been better, perhaps, had the signs been avoided and the words "too high" or "too low" used instead, for then there could have been no misapprehension, nor any explanation needed. It is possible that Yale may be induced to make this improvement over Kew, for certainly Yale usage should be very soon the rule for this country. And it may be hoped, too, that Yale will make another step in advance of Kew by putting upon each certificate the time required for each certified instrument to attain its maximum indication when placed under the tongue. This, however, takes a good deal of time, and is of less importance, because each physician can do it for himself if he chooses, and he cannot use his instrument intelligently without knowing the time it requires. It is, however, very certain that a very large number of observations are valueless in consequence of insufficient time being allowed for the instruments to reach their highest point.

In the application of the clinical thermometer, if the physician has a safe, slow instrument and wants to save time, he has only to call for a glass of tepid water, and, having assured himself that it is not above blood heat, to stir the thermometer and lower part of the stem round in the water for half a minute to one minute, and when he sees that it has nearly reached the normal temperature transfer it quickly from the water to the patient's mouth. A thermometer which requires eight minutes to reach its maximum indication under the tongue will reach the same point in less than half the time in a glass of water of the same temperature as the mouth, because the surface contact is so much more rapidly changed in the case of the water. This use of water has another advantage of so much importance that really it should be uniformly adopted. The cleanliness of it addresses itself at once to the sensibilities of patients, for few patients can help mentally

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wondering whose mouth that thermometer has been last in. A successful eye-surgeon or a successful dentist always takes care to let his patient see him wash his hands in clean water and dry them on a napkin taken unfolded from his drawer. Then why should not a physician let his patient see him rinse off his thermometer before and after applying it? There can be no doubt that the anus is slightly the best place for the thermometer in observations of temperature. Yet except in cases of young children, and in very exceptionable conditions in adults, the inconveniences far overbalance the slight advantages, and the mouth is now becoming very generally accepted as far the best place. The axilla has one or two disadvantages that are perhaps rarely thought of. In dry and harsh conditions of the cuticle, not rare in cases requiring frequent observations by thermometer, the cuticle becomes so bad a conductor that even by waiting a very long time the thermometer gives an indication much below that of the mouth at the same time. This can be measurably corrected by sponging the axilla out with tepid water, and leaving it moist when the thermometer is placed in it. The other difficulty is that when a thermometer is placed in the axilla, some pressure of the arm is needed to keep it in place, and this pressure diminishes the cutaneous circulation in the parts in contact with the instrument, and this in time lessens the temperature so that the thermometer indication is liable to be too low. In the conditions of enfeebled circulation of low fevers, the errors of observations from this cause are often important. If any one will take the bulb of a sensitive good thermometer between the moistened surface of his finger and thumb and compress it pretty firmly for the time needed to attain its highest indication, and notice carefully what this indication is, he will find it very low, because the pressure has impeded the circulation and kept the blood out of the parts. Let him now slack up the pressure gradually and he will soon see the temperature begin to rise as more blood begins to circulate in the parts, bringing with it the internal temperature.

Hence, when all circumstances are fairly considered, the rapidly increasing custom of using the mouth for temperature observations is the best, and whenever it is adopted, then cleanliness, even to great nicety, should be used, and the success which attends the cleanly eye-surgeon or dentist will be

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sure to follow. This plea for cleanliness, which comes so near to Godliness, may be impressed by a little story which, if not true, is well found ("è ben trovato") for the illustration it affords. The scene presents a philanthropic visiting committee at the second bed from the door of a hospital ward.

"Well my man, how are you getting on? Is there anything we can do to make you more comfortable?"

The patient, after a little modest circumlocution, admits that there is one thing he would very much like, and that is, to exchange beds with the man next to the entrance door of the ward.

"Well, but why do you wish to make the change particularly?" The patient thought it would be more airy and cheerful there, with a better light, and these did not matter to the patient there now, for be was either unconscious or slept all the time.

When pressed for a better reason, however, he gave it.

"The doctors always come in at that door, and they put the same thermometer in my mouth that has just been in that man's stern."

Discussion.

DR. PERKINS, of Schenectady: I would remark, Mr. President, with regard to clinical thermometers, that I do not believe there was ever a cylindrical thermometer made which ceased to contract. Wherever there is a sudden pressure made upon any substance that substance yields to it. It would be a great desideratum if thermometers could be constructed so as to have a bulb inside of the cylinder. I would say, let the thermometer used either as a standard or for clinical purposes, be one which has a bulb.

DR. WM. MANLIUS SMITH, of Syracuse: Mr. President—I would like to ask Dr. Squibb how we are to compare our thermometers?

DR. SQUIBB: Take the standard thermometer and the one which you wish to compare with it and place the two under the tongue and allow them to remain the length of time necessary to reach the maximum indication. The registers will then be read and the difference between the two noted, and that of course will be the error.

DR. PERKINS: It can also be done by taking a large body of water and immersing the two thermometers in it, and then note the difference in the registers. The sources of error are less by this method than by testing them under the tongue.

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III.—NOTE ON BEEF JUICE.

BY WM. S. ELY, M. D., ROCHESTER, N. Y.

There are conditions of frequent occurrence to almost every member of this Society, in which the patient's life turns on the question of adequate sustentation. I refer to cases of great asthenia due to protracted and exhausting illness, to hemorrhage, shock, septicæmia and operations of various kinds.

For more than fifteen years, in the states named, I have at times used besides cream, milk, eggs and alcohol, from four to thirty-two ounces of beef juice in twenty-four hours. The average amount may appear large, but the effect has seemed so favorable in the experience of myself and many of my professional friends in Rochester, that I take the liberty of referring to a process by which the juice is easily expressed as well as to its liberal use, for the information of those not already familiar with both. In diet books it is stated that beef juice is prepared by broiling the beef, cutting it into small pieces, and squeezing out the juice with a lemon squeezer. Very early I found that it was almost impossible to obtain any considerable quantity by this method. I therefore, in 1870, had a meat squeezer made on the principle of the lemon squeezer, with arms 32 inches long, and several years ago exhibited this instrument with its uses at a meeting of the Central New York Medical Association. Even with this, the expression of the juice in the desired amount, day after day, always proved laborious and exhausting. In 1880 it was discarded and there was substituted for it, what is known as the *Fruit Press*, which I am about to present to the Society. By this, it is easy to express the juice in any desired quantity.

Fresh and juicy lean beef should be finely chopped by the butcher. A pound or more of this is thoroughly heated, in an open dish, over the fire, with constant stirring to keep it from burning. It is then quickly transferred to the cylinder and by the screw pressure of the instrument, the juice flows readily. Thus obtained it is a bright red fluid, becoming darker after standing, of a specific gravity of 1.032, acid, rendered solid by boiling, and as it cools, becoming rapidly coated with fat. Before being administered this is eliminated by passing it two or three times through a fine strainer.

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The juice represents the albumen and salts of the beef, and nearly everything but its fibrine, and is in fact the most concentrated preparation of beef with which we are familiar. In warm weather it decomposes rapidly and should be freshly prepared every few hours. I have given from one drachm to two ounces of it an hour, according to age and conditions. A child, 8 years old, in the progress of diphtheria, took last week, twenty-eight ounces in twenty-four hours, and the same quantity of milk, for several days in succession, with perfect assimilation. Beside the milk, this represented the juice of nine pounds of beef per diem.

Occasionally this preparation disagrees. In some patients it produces nausea, vomiting and diarrhœa, with others it is too suggestive of fresh blood, to be acceptable, but in numerous instances it has entered as a determining factor in saving life. When used for rectal alimentation it is a good substitute for defibrinated blood as the latter cannot always be readily obtained.

So much has been said of the questionable value of beef tea as nutriment in sickness, and so much use is made of home and foreign extracts, variously diluted with water, that I have felt justified in calling attention to the advantages of beef juice in larger quantities and more varied conditions than those in which I believe it has been generally employed.

Discussion.

DR. H. D. NOYES, of New York: Mr. President—I would ask Dr. Ely, to what temperature the beef is raised before it is pressed? Is it simply heated over a fire on a gridiron, or in an open dish?

DR. ELY: I do not know the exact degree of temperature that has been observed in preparing it, but the usual rule has been to heat it so that it was uncomfortably hot for the finger. Probably it is desirable to heat it so as to liquify the fat.

DR PERKINS: Mr. President—I think there should be some definite statement made with regard to the temperature to which it should be raised. For, if it be heated beyond a certain degree the albumen will coagulate and no amount of squeezing would bring it out. I think it should be understood that the beef should be heated to only a moderate degree. The utmost limit should not be above 60° C. or 148° F., for above that the albumen coagulates.

DR. JOHN P. GRAY, of Utica: Mr. President—I have long been in the habit of using beef juice, and with reference to the degree of heat, I may say that when the dish is set upon the top of a stove or range, it is rarely heated above 110° or 120° F. which would be below the point of coagulation for albumen.

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I have sometimes preserved beef juice by adding a small quantity of alcohol in summer or a small quantity of claret, and have kept it in that form. About an ounce to the pint (6 p. c.) will keep the juice from souring, and will also add to its medicinal and food value.

IV.—THE CONDITION OF THE TUBERCULOSIS QUESTION.

BY S. O. VANDER POEL, M. D., OF NEW YORK, N. Y.

Upon few subjects in medicine during the last half century has the literature been more voluminous than upon Pulmonary Phthisis—Whether, in the enunciation of theories, and the changes in nomenclature of theories, our real knowledge of the clinical features of the disease has correspondingly advanced, is a question which admits of discussion, and which we shall not attempt to answer.

In the few moments which I shall ask your attention to views, which seem to me more fully to explain the origin and progress of chronic lung disease, than some which have been received, it is also proper I should premise, the question is still unsettled. Pathologists with whom I have lately conversed have undergone decided changes in views within a recent period, and those who are accustomed to refer to the standard text-book of Dr. Flint, will notice that the views of the last edition, are decidedly modified from those of the previous one.

It is safe, however, to assert, that previous to the time of Bayle and Laennec, there was no definite theory of the condition of the lung, constituting consumption. To Laennec more than any other person, we owe definite ideas regarding what he called tubercle. With his views and the attributed changes which tubercle undergoes, every physician is conversant. So strong an impress did they make upon the medical mind, so thoroughly accepted were they in spirit and pathology, that they remained long unchallenged, and formed the pathology upon which all our treatment was, and even now to a great extent is based.

At a period not remote to the recollections of most of those present, this opinion which for thirty years had remained virtually unchallenged, found in Addison in England, and Niemeyer in Germany, advocates of an entirely different pathology.

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Whereas Laennec had described phthisis, as occasioned by the presence of a foreign element called tubercle, which owing to a depraved state of the constitution was exuded into the tissue of the lung, and there underwent other changes, which ended in the destruction of the lung tissue; its first appearance being that of an exudation, was not necessarily *inflammatory* in its character. Niemeyer on the other hand insists that the beginnings of phthisis are mainly due to inflammatory changes. These changes resulting in the aggregating of caseous masses, which primarily involving the lobuli of the lungs, gradually extend to the interlobular structure, until the original elements of the lungs are obliterated, and that changes up to this point may occur without the presence or intervention of tubercle. Further that phthisis may progress and pass through its stages without tubercle being present, and that where so present, it is a secondary, superadded result, arising from infection, or the resorption of inflammatory results in the individuals themselves. A recent English writer, says in this connection, "Tubercle is a short lived product, arising from inflammatory residua, which have undergone degeneration, caseation, and been conveyed into the system, or to distant parts of the lungs, or other organs, by the blood vessels and lymphatics, and even directly by the air tubes. Tubercle probably lives but some weeks or months, but the changes in the lung ascribed to tubercle may last for years."

Admitting this we are compelled to look for a new factor, as originating these caseous changes so constantly found in the lung. This is found in the results of catarrhal pneumonia, which is now regarded as the only true form of inflammation of the lungs—what has until of late been styled pneumonia, croupous pneumonia, lobar pneumonia, and which does not involve any permanent change in lung structure, being rather a general, than a local malady. Clinical experience, however, tells us, that not every case of catarrhal pneumonia ends in caseation.

What then are the conditions, diathetic or otherwise which lead to this result. We know that a catarrh of the minute bronchii, will not in a healthy person originate a phthisis. A neglected catarrhal bronchitis in a *scrofulous* person will do so. Scrofula then is the key to the whole sequence of changes. In a scrofulous person inflammatory changes are slow: they

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cause permanent infiltrations of the cellular connective tissues of organs which caseate and die. Dr. Pollock of the London Hospital for Consumptives, says of this scrofulous caseation: "an exudation of large cells occurs, which swell up, and undergo necrosis, and the detritus passes into the lymphatics, and is thus transported into the sub-epithelial connective tissue. The exudation is hard, dense, grey, and unprovided with blood-vessels, so that necrotic changes soon begin, and in those changes the walls of the air-cells, and the surrounding peri-vascular and peri-bronchial tissue participate. Such indurations know of no recovery. They may degenerate and be removed, leaving a hole in the lung, but they are never organized and absorbed." If then we admit the proposition that the caseous indurations of the lung, so long supposed to be an aggregation of tubercular deposits, originating from blood dyscrasia, are in reality the result of an inflammatory process, and that the grey tubercular nodules, which are almost invariably present in proximity to these masses, are a secondary product, the question arises, how are these latter formed, and what are their relations to the caseous masses? In other words how does scrofula become tubercle?

Let me here say parenthetically, the existence of a pure tubercular phthisis is not denied. In the experience of most of you, cases of acute phthisis are met, which originate suddenly, and pass through the various stages with great rapidity, where probably the evolution of tubercle was the primary factor, and where the process of secondary infection is carried on with great rapidity; but we speak now of the more common form of the disease, which begins insidiously, and where the progressive changes due probably in the first instance to scrofulous inflammation of catarrhal pneumonia, or it may be of glands in distant parts, inducing through the lymphatics and blood-vessels a series of secondary infections, which influence the progress of the disease, according as the deposits take place in restricted, or in large areas of lung tissue.

Let us then answer the question, how does scrofula become tubercle, and how does the lung infection with all its changes of structure, called phthisis, commence from an infection? If it be a self-poisoning, the poison must have originated somewhere else; and this argues antecedent disease of some part, for it is no longer pretended, that the blood or humors elaborate

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a septic material to be deposited in the meshes of the lung tissue.

The reply is, that a scrofulous disease of mucous membrane, or of joints, or of a lymphatic gland, has furnished the detritus of a caseation, which was afterwards, by vessels or lymphatics carried into the lung, and originated the destructive changes in question.

This then is a great departure from the doctrine of Laennec, still that of many of the pathologists of the French school. It abandons the theory of general disorder of the blood or system reflecting itself in a local disease, but asserts that a local disease of some distant part, has originated another local disease by infection. Instead of constitutionality, we are carried to localization of disease as a primary factor.

We have thus a key to much that is valuable in prognosis and practice; for it depends on the nature, the limit and the proclivities of diseased products, whether structures can be repaired, indurations dispersed, or changes tending to life and organization, or to death and degeneration shall take place. And so in treatment, if the fever and wasting be a measure of the inflammation in a part, we can hope to moderate both by checking it in the affected organ. On the other hand, if these formidable symtoms be a blood dyscrasia only, we are lost in the search for blood remedies which shall meet and modify or reverse them.

As will be inferred from what has been said, and the experience of each one's clinical observation, pulmonary phthisis is not the same in its manifestations, nor is there a unity in its developement and progress. Excluding acute tubercular phthisis, which has been alluded to as a purely tubercular affection, running its course in a much shorter time than chronic lung disease, pulmonary phthisis presents itself under three general types, to one or the other of which, most of the cases we meet can be referred.

1st. Chronic pneumonia of one apex, with much dullness, slight rales, shrinking walls, slight fever. I am aware there are gentlemen whose opinion is entitled to the highest consideration, who say, no pneumonia can occur in this location without the previous presence of tubercles. My experience has led me to suppose, I had croupous pneumonia of this portion of the lung. As we know, its course is very slow, but if not to cure, is at least very chronic.

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2d. A broncho-pneumonia, usually the sequence of some previous acute disease or eruptive fever. Here we have nodular foci scattered through the lungs. There have been wasting and fever before any physical signs. From the proneness to death and degeneration of caseous matters, they may run rapidly into cavities.

3d. Catarrh of the apex, crackling rales in the sub-clavian or supra-spinous regions; dullness slight and diffused, possibly an early hæmoptysis, with early fever and wasting. A neglected catarrhal bronchitis has originated this. Here there are in a peculiar degree the anatomical changes, which catarrhal pneumonia presents—a cellular inflammation of the pulmonary connective tissue, around which are grouped tubercles of recent formation. This is ordinary progressing phthisis. The fever is high, for the blood is constantly charged with the detritus of inflammatory and tubercular products. Local morbid processes manufacture the fever, for febrific substances, the result of their necrosis, are constantly being added to the blood. Hence the high temperature and the waste of tissue and marasmus.

Nutrition is spoiled by the same process, and the blood laden with morbid detritus is unfit for the ordinary nourishment of the body.

In this view it is not difficult to understand how a local disease itself originated by a local infection, may elaborate fresh morbid material for new infections. It will also explain many of the other phenomena of phthisis.

Some now may ask why this disease is located primarily at the apex of the lung. This point has been so exhaustively considered in the article on Pulmonary Phthisis, in Ziemssen's Cyclopædia, that we must refer inquiries to it for satisfactory explanation.

It has not been our purpose to recite the microscopic changes, which take place in the lung in the earlier stages of phthisis, the study of which in late years has changed the views and theories so long accepted. If we can in the first stages regard phthisis, as a disease having large local relations, instead of a constitutional affection, a blood dyscrasia, can study each case in its individuality, and local features, and not sit with folded hands watching the uncertain action of a peculiar class of nutrients, we can do much to assist the activ-

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ity of the febrile action, and possibly limit the destruction of tissue to the primary deposit, or if by any means we can induce a growth of fibrous connective tissue immediately about the mass, its low vitality would lessen the activity of absorbent action, and consequently new centres of infection would be averted. The original masses after emptying the softened contents could pucker and cicatrize. Nor is this a mere hypothetical proposition. Autopsies frequently reveal this condition, which must have taken place years before.

Let me recapitulate briefly the positions I desire to impress:

1st. Pulmonary phthisis is not wholly a blood dyscrasia, resulting in the deposition from the blood of a peculiar element of low vitality called tubercles, at first in small grey specks, which aggregate, change their appearance, and become the large cheesy masses so familiar to all; a doctrine elaborated by Laennec, and still maintained by a large proportion of the French school, nor

2d. Is it, as taught by Niemeyer, a simple caseous degeneration, but rather that these masses, whether in a bronchial or mediastinal gland, or the result of catarrhal inflammation in a scrofulous subject, become infecting foci, and as a result the tubercular element soon appears. This material of low vitality soon undergoes necrotic changes, hastening this process in the general mass. The infecting foci are constantly increased, until the lung tissue is largely infiltrated; with the increase in infiltration, there is a corresponding increase in the range of temperature, and rapidity of emaciation. The tubercular deposit favors this activity as we know in cases of pure tubercular phthisis. If then by appropriate treatment, hygienic or medicinal, we can exclude it, the chronicity of the case is better assured, and the chances of recovery correspondingly increased.

It gives a per centage of hope, where the teachings of half a century have been almost hopeless.

Discussion.

DR. E. M. MOORE, of Rochester: Mr. President—I do not intend to discuss this paper, but merely to ask one or two questions. I have not any clear idea as to what is meant by the word scrofula. It is one of those shadows with which we have to deal under much ignorance. As far as I can infer from listening to the paper, the author's view regarding tubercles is, that changes take place in some portion of the body, or rather in some of the histological elements, and subsequently

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by a process of absorption, the results of these changes are transported to the lymphatics, thence through the circulation and finally are deposited in the lung. But that does not answer the question as to exactly how these histological changes take place, or in the first place why they should come.

Again I am puzzled, that there should be any possibility of recovery by softening of tuberculous matter, if these histological changes which constitute scrofula, behave in the lung as they do in the neck and other organs. In the neck, for instance, we all know that oftentimes a scrofulous gland may continue to discharge, and if these histological elements are incapable of organization they will be washed away.

There is another question. I find that persons who are devoted to certain trades, are liable to tubercle, and die of tuberculosis, and upon microscopical examination, we find that in the center of these tubercles there exist foreign bodies. These are the cases known as axe-grinders', scissors-grinders', and stone-grinders' consumption, and coal-men and others of a like occupation have it. But here is a direct traumatic condition which terminates in the production of this deposit in the lungs.

Again, my experience has convinced me that tubercle often results merely from some injury to bone, and when there is no constitutional predisposition or anything like scrofula in the patient. If these deposits come from caseous nodules in diseased bone, then Niemeyer's explanation was satisfactory so far as that is concerned; they were transported from older pus, and not scrofulous pus, and that which possessed no special histological character different from that produced by ordinary inflammation. I put these questions for the express purpose of getting information.

DR. S. O. VANDER POEL: Mr. President—It is much easier sometimes to put questions than it is to answer them. I will not undertake to say exactly what scrofula is, as I do not think the question can be fully answered. But I think that Dr. Moore and every physician will agree with me in saying that inflammation acts differently in different persons. In one case it may progress and terminate in prompt recovery, while in another it never seems to rise and pursue the course of a frank inflammation, but progresses slowly. When changes take place in the histological elements of lymphatic glands, for example, they take on a passive character, if I may use the expression or continue in a semi-passive state, and these cases occur in scrofulous persons, persons who have a peculiar diathetic condition which can be expressed by no single word, but the word scrofula conveys a satisfactory meaning in any case that may be before us. It is in those cases where, with some discharge from the system, there may be enlarged bronchial or mediastinal glands, or in diseases of the bones when absorption goes on rapidly, that we see the tendency to deposits in the lungs. We may call it caseation in the first instance, but even then Dr. Moore will agree with me, that in the cases which follow the different trades, there has been probably an inflammatory action, as a starting point, due to the presence of a foreign body.

The moment you have scrofulous inflammation occurring, the absorption of that element elaborates itself in tubercle. It i rather a secondary process to the caseous element. It is an element of much shorter vitality than the caseous element; for the caseous matter may remain for a long time undisturbed, but, as soon as the tubercular element is present, necrotic changes develop, and more or less death or softening of the parts take place. I do not know as I can give an anatomical definition of scrofula, but I think the doctor himself will recognize the condition to which I refer.

DR. MOORE:—The difficulty is this. As I understood the paper it was that tubercle and this caseous material were deposited in the lung in consequence of certain his-

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tological changes taking place in another portion of the body: and that it was absorbed.

DR. VANDER POEL:—Not necessarily. It may take place at the point of infection. It may occur from different causes.

DR. MOORE:—The traumatic cause was not taught by Laennec.

DR. VANDER POEL:—The traumatic cause illustrates my normal tissue process to a certain extent. We should all be pleased to hear the views of the President.

THE PRESIDENT:—As I have been called upon, I will make one or two remarks. I have asked myself the same question a hundred times, what is scrofula? It appears to me that we use the word in a number of instances where we do not care to use much circumlocution. It is a convenient word to express a number of conditions. For instance, there is inflammation of healthy mucous membrane, a simple catarrh of the eye, lip, mouth, anywhere in the body, it heals very rapidly and we do not speak of scrofula.

But there is inflammation of another mucous membrane, or of the same mucous membrane in another individual, and it does not heal readily, and when we study the changes we find that they are of the following kind: new granulat ons spring up, proliferation of new cells takes place, as if it was to heal as readily as in the other case, but it does not heal, and instead of the formation of new epithelial structure we see the ulceration extending deeper into the intercellular tissue, and although granulations form, the new cells break down as fast as they are formed, and we call that a scrofulous process.

Or there is a blow upon a bone, it heals quite well in a number of persons, but in other persons it does not. The same original process takes place in two persons; there is a little hemorrhage under the periosteum, a certain amount of irritation takes place, a slight proliferation of cells occurs, the periosteum is simply thickened, in one case, and total absorption follows, recovery is complete and that is the end of the difficulty. In the other case, as soon as the new cells begin to be formed the end is reached so far as healing is concerned, and they break down as fast as they are formed. In the one case we have the healing process going on kindly, while in the other we have ulceration of the bone. Whenever such a slow healing process manifests itself, and there is a constant breaking down of new cells, whether upon a mucuous membrane or bone, we call the individual in whom such a slow healing process occurs, scrofulous. We did not know beforehand that he was scrofulous, but we conclude that he was scrofulous after we have seen these processes. It is a convenient name to apply to a person who exhibits the fact, that granulations form normally, but instead of terminating normally they break down in an unusually short time, and instead of forming tissue are dissolved. This is what we call scrofula.

Or, an ordinary stomatitis occurs; the mouth is sore, salivation occurs with irritation. The result is irritation of the lymphatic ducts in the neighborhood and swelling of the adjacent lymphatic glands. Now, we expect, in an absolutely healthy body, that, when the stomatitis, has subsided, the affected lymphatic ducts and glands will soon return to their normal condition. But we know that there are quite a number of cases in which, when such enlargement of glands takes place, it does not disappear, and when the accumulation of cells is considerable, the center will break down, and we have as the result caseous degeneration of the center, and we call it a scrofulous condition. I have not been able to get any further than that. It is not necessary to fall back upon the blood, and upon humoral pathology at all.

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I think we are just as safe in saying that when we use the word scrofula, we are using a word which has no other significance than that it expresses a number of processes which take place abnormally as described before. It is certain that many cases of tuberculosis follow such scrofulous degeneration of the glands, or mucous membranes or bones, or even of the external skin. These cases, I believe, admit of a very ready explanation. They are undoubtedly due to an embolic process, and have been proved to be so in quite a number of instances. Not only may tuberculoses be developed when the detritus from such glands as have been described is transferred to the lungs, but the same thing has been observed when there was a foreign body carried there. It has been observed when the eggs of cestodes have been carried to the lungs, as these eggs have been found in tubercular deposits. Granules of mercury having entered the circulation may give rise to acute tuberculosis. At the same time I will remind you of the fact, pointed out by Panum, that in a large number of cases acute tuberculosis can be produced by inoculation, apparently of a number of different foreign bodies, no matter which. Many cases of acute tuberculosis are undoubtedly the result of embolism.

I am afraid we have again arrived at a period in our pathology, when we are in danger of mistaking tuberculosis for phthisis and phthisis for tuberculosis. Niemeyer has, rather sensibly, tried to keep these two terms separate, and it was thought that he had succeeded. I think Rindfleisch has brought more confusion than light upon the subject by again approximating part of Laennec's views. It appears to me that there is no one more right than Virchow. Some sixteen or seventeen years ago he directed attention to the fact that tuberculosis and phthisis must be kept separate; that tuberculosis is a process of its own, and phthisis is the result of a number of processes.

When a person has catarrhal or croupous pneumonia he may be taken with consumption; or when a person has only inflammation and enlargement of the bronchial glands he may have from embolism, consumption and tuberculosis. But phthisis means a process, or consumption dependent upon suppuration, and we find suppuration in every instance. Tuberculosis has a specific process which can be recognized usually during life, and certainly when seen in the dead body.

V.—THE GENU-PECTORAL POSTURE IN THE TREATMENT OF RETRO-DISPLACEMENTS OF THE UTERUS AND IN DISLOCATIONS OF THE OVARIES.

BY WILLIAM WARREN POTTER, M. D. Buffalo, N. Y.

The influence of posture upon the health of woman is one of acknowledged potency; that many of her maladies are primarily induced through this influence cannot be denied. It must be so, since gravity plays such an important part in the economy; the solids and fluids of the body, alike, are subject to its influences, and obey its laws; and gravity, in turn, yields a large measure of submission to the mandates of posture.

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The reproductive organs of women are so generously supplied with blood-vessels, as to make them peculiarly susceptible to the influences of gravitation, while their extreme mobility renders them especially liable to displacement under the action of gravitory law. If this be true in health, when all of the functions of the body are normally performed, then it must be admitted that the tendency is materially augmented when these organs are increased in bulk, or changed in structure, through the influences of disease. That which is physiological under certain conditions, becomes pathological under others. It is but a step accross the health line.

Since gravity, therefore, becomes a factor of so much importance, etiologically speaking, in the sexual disorders of women, it is fortunate that we are enabled to invoke the aid of this self-same law, in the treatment of many of the maladies which it has been instrumental in causing or augmenting. To accomplish the reversal of the normal gravitation of the blood and viscera, and thereby relieve the reproductive organs of the vascular distension, hyperæmia, blood-stasis, and impaction, consequent upon uterine and ovarian dislocations, is to fulfill one of the most prominent and important indications of treatment which these cases present. Whenever it becomes advisable to reverse the action of gravity upon the pelvic organs of the female, or to remove the pressure and impaction of the superincumbent viscera, the genu-pectoral posture furnishes a most precious method of accomplishing this result; moreover, through its systematic, intelligent, and persistent employment, we lay a broad foundation of relief, upon which to construct the ultimate superstructure of possible cure.

Having accustomed myself during several years past, to employ the knee-chest position in the treatment of all backward displacements of the uterus, as well as in prolapse of the ovaries, I am prepared to affirm the superiority of this method over all others with which I am familiar, in the management of this class of maladies. Under its timely and judicious use even the most complicated and obstinate kinds of retroversion and retroflexion, with fixation of the uterus in the hollow of the sacrum, may be made to yield.

The methods generally recommended, and commonly employed, in reducing the retro-displaced non-gravid uterus have, oftentimes, been disappointing and unsatisfactory in their re-

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sults; while, in not a few instances, dangerous conditions have followed their use. The genu-pectoral method of replacement possesses the advantage of freedom from danger, besides being more effectual and infinitely less painful, than reduction by the sound, or redresser, or even by manipulation.

It is a well-known fact, that when a woman is properly placed in the knee-chest posture, the pelvic and abdominal viscera gravitate toward the epigastric region, and that air, upon separation of the labia, rushes into the vagina, dilating it to its fullest capacity, and making its entire surface visible at a single glance. The accidental discovery,—perhaps I should say re-discovery,—of this fact by Sims, in 1845, marked a new era in the intra-pelvic surgery of women. New instruments were devised to meet the new order of things; and, soon, many of the accidents of parturition, hitherto entirely beyond the ken of the most skilful surgeon, were repaired with the greatest ease.

While, therefore, the superior advantages of the genu-pectoral posture, or some modification thereof, have been universally recognized by gynecologists in bloody operations upon the genital tract, I feel sure that I am entirely within the limits of truthfulness in asserting that, except by a few specialists, it is seldom brought into use for the commoner ailments, for which it seems equally well adapted.

Authors of text books as a general rule, if, indeed, they refer to the position at all, recommend its trial in the replacement of such wombs as have resisted all other known means. They would try all other methods first and, finally, after failure and disappointment, reluctantly perhaps, resort to the knee-breast posture. Teachers of gynecology also, in so far as I am familiar with their methods, with a few notable exceptions, follow the same order, as do the text books, in recommending the method. It will be my purpose, in this article, to advocate the adoption of the genu-pectoral posture *as a primitive measure*, in the reduction of *all* retro-displacements of the uterus, as well as in prolapse of the ovaries.

To obtain the full benefits of this position, in the treatment of the diseases under consideration, some conveniences are essential, and they may as well be enumerated here:

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1. A table.
2. A proper speculum.
3. A double-curved uterine dressing forceps.
4. Bits of cotton tied with thread.
5. An assortment of pessaries.
6. Jars containing (*a*) carbolated glycerine, (*b*) glycerate of tannin, (*c*) sedative mixture,* etc.

So much depends upon minute attention to details in this, and for that matter, in all gynecological procedures, that I may with propriety make more specific and extended reference to these working tools. Specialists will not, I am aware, feel much interest in this dull recital; but as most of my auditors are not of that category, a more minute description of whatever may be necessary for the success of the method, will not, I feel sure, be considered out of place.

First, Of the Table: Many elegant and useful ones are in the market, but as they are, in the main quite expensive, I recommend an ordinary four-legged table; provided only, it be of proper height and dimensions. It should be mounted on casters, supplied with a thin mattress, and may be conveniently furnished with drawers on the right side. Extension foot-rests can be added at one end, for use in the dorsal position.

The table possesses many advantages over any form of examining couch or chair, for all gynecological work; it is necessary, alike, for the comfort of the patient, and the convenience of the physician, while, for the business in hand, it is simply indispensable. Having once become accustomed to its use, I am sure no one would go back to the old way.

Second, Of the Speculum: It is important, for knee-chest uses, that the speculum should be constructed with laterally expanding blades, and be more or less self-retaining. A perineal elevator with a convenient handle, and a flattened blade, goes to make up an essential part of the instrumental equipment. These requirements are admirably met in the instruments devised by Dr. Bozeman, and which bear his name. While the Sims speculum is, undoubtedly, possessed of a wider range of usefulness than any other speculum, and may be made vastly serviceable in the genu-pectoral posture, yet for purely knee-chest purposes, the Bozeman instruments are superior to any with which I am familiar.

* Formula given on page 148.

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Third, Of the Forceps: The double-curved dressing forceps is superior to the straight instrument for the firm placing of the cotton pledgets in the posterior vaginal *cul-de-sac*. A thorough trial will furnish ample proof of this fact, which is by no means an unimportant one.

Fourth, Of the Cotton Pledgets: I am in the habit of procuring the cotton which I use in columning the vagina, at a thread mill in New Jersey. It is wound upon spindles into large compact coils, and is readily broken up into short bits, which are secured in loops of strong sewing thread (Coats' No. 8); and each pledget when made up should be about the size of an English walnut (30 by 40 mm.) Any good, clean, raw cotton will answer the purpose excepting, however, absorbent cotton, which is too inelastic when wetted; but the kind mentioned is much more quickly prepared than any other and, besides, is not expensive. The pledgets should be prepared in advance and kept on hand in sufficient quantity to meet the requirements of the practice. Made in this form they are, also, very useful in the tamponade of the vagina for hemorrhage.

Fifth, Of Pessaries: Much might be said in regard to the pessaries required; but this is a question which must be left to the judgment of the physician, to be exercised in each case as presented, for there is as much difference in vaginas as in faces. For myself, I confess to a growing preference for the Albert Smith pessary which, in some size or other, seems adapted to the greater number of cases. For temporary use, it is well to have an assortment of sizes constructed of elastic steel spring, covered with soft rubber; but for more permanent service the hard rubber pessary is, for obvious reasons, the only proper one.

These that I have mentioned, form an esential part of the armamentarium, necessary to the success of the measure in its initial stages. Many other conveniences can be supplied, from time to time, as conditions arise to suggest them.

Having equipped ourselves with the requisite working tools, let us proceed to apply them practically in the treatment of a case of retroversion of the womb.

A celebrated authority in culinary art when giving directions for hare soup says: "First catch the hare." It is requisite that we should first ascertain the nature of the case with

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which we have to deal. Suspecting a case of backward displacement of the uterus, the patient is placed upon the table in the dorsal position, when the diagnosis can generally be made out by digital and bi-manual examination. The sound is rarely necessary in this form of displacement, but may be appealed to in doubtful cases. Having ascertained that the womb is retroverted, the next step is to effect its replacement. The patient is now directed to assume the knee-chest posture. She will need explicit instructions in regard to the position, and I generally explain to her the mechanism of the posture, and just what I expect to accomplish by it. This once done, I have yet to meet the first patient, with any sort of intelligence, who has objected to the attitude. The dress skirt should be slipped off, and the underskirt fastenings and corsets loosened. The patient should now be made to kneel upon the front of the table near its edge, and to cast the trunk forwards, until the upper portion of the chest touches the mattress. A thin pillow for the face, turned sidewise, to rest upon, adds to the comfort of the patient. The thighs should be at right angles to the table and *perfectly vertical*, thereby affording a greater inclination of the trunk. A triangle is thus formed with the aid of the table,—the thighs furnishing the upright, the trunk the hypothenuse, and the table the base.

The phenomena which ensue when this posture is correctly taken, are:

First: Reversal of normal visceral gravity.

Second: Marked elongation and expansion of the vagina.

The co-operation of these forces seems to accomplish the reposition of the retroverted womb, oftentimes, without other aid, instrumental or manual. The gravitation of the abdominal viscera towards the epigastrium, makes way for the pelvic viscera to follow, thus carrying the uterus to its proper level, and, upon separation of the labia, air rushes into the vagina, expanding it to its utmost capacity, and becoming a powerful supplementary aid to the gravitory law. If there are no adhesions, and if the fundus is not too firmly wedged into the sacral excavation, the joint action of these forces alone will, no doubt, effect replacement of the organ. In this position the weight of the superincumbent viscera is taken off the uterus and its appendages, the pelvic hyperæmia and impaction which the erect and other postures may have caused, are either

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modified or disappear, in obedience to the law of gravitation, while the power of tenesmic resistance is wholly abolished. It is of no consequence to direct the patient to relax the muscles of the abdomen, for, in this position, the woman cannot possibly "bear down." There is complete suspension of intra-abdominal pressure in front, and a powerful intra-vaginal atmospheric pressure behind. The vagina becomes expanded to its greatest capacity, folds and wrinkles are smoothed out, and the cervix is seen at the most distant part of this shining, dome-like vault.

In every case it is my custom to commence the treatment, by filling the post-cervical space of the vagina with the pledgets of cotton already described. The first two pieces are usually saturated with carbolated glycerine (1 per cent. carbolic acid), and placed well behind the cervix, covering the os uteri, to be quickly followed with other dry bits, until a column is built down to the pubic arch. This is done through the Bozeman speculum, and each pledget as it leaves the forceps is caught by the distal end of the perineal lever, and gently but firmly carried to its place. The lever is first withdrawn, then the speculum, and, finally, the right index finger is introduced to steady the cotton column, while the patient is resuming the erect posture. It is well, now, to make a little gentle pressure in the iliac regions with the left hand, to facilitate the impaction of the viscera *behind* the uterine body, the right index finger, meanwhile maintaining firm hold upon the cotton.

This support should usually be allowed to remain from thirty-six to forty-eight hours, when it can be withdrawn by the patient, who is directed to make traction upon the threads which have been previously united by a single knot, and the superfluous ends cut away. After the removal of the support, the vagina should be thoroughly cleansed with a copious injection of hot water, administered in the dorsal position; immediately afterwards the knee-chest posture is assumed and the cotton column again built in the same manner as just described. This process should be repeated with regularity and precision, until the parts are sufficiently prepared for the reception of a more permanent support, or until the cure is complete as the case may be.

This method of treatment possesses a two-fold advantage.

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First: It furnishes a most complete, secure and painless splint to the replaced organ; and second: it is, in effect a poultice to the hyperemic and tender uterus, the inflamed ovary, or other intra-pelvic viscera and tissues which, by reason of exquisite tenderness, forbid the immediate use of harder and more permanent kinds of support.

Thus far we have been dealing with a simple case of retroversion without impaction, or fixation of the fundus in the hollow of the sacrum—a case in fact, capable of automatic replacement. If, however, there should be impaction without adhesion, a little gentle pressure upon the fundus with the finger, or with the sponge-armed forceps will, speaking generally, carry the uterus to its place. But, if there should be adhesions, the reduction becomes more difficult and, as a matter of course, slower of accomplishment; nevertheless, under the method advocated, many cases formerly deemed incurable may be restored to normal positions.

The most effectual way of managing such cases, appears to be as follows: The patient having assumed the knee chest posture, the dilating speculum with the perineal retractor are now introduced, whereupon the outlines of the uterine body can readily be seen occupying the lower pelvic space, and stretching across it from bladder to rectum. The fundus will be found joined to the pelvic connective tissue with more or less firmness, according to the duration of the retroversion, and the extent of the cellulitis which has previously existed.

We now proceed to pack the space posterior to the uterus, with the glycerated cotton pledgets in the same manner as before; only fewer in number will be required. Sometimes, indeed, but two or three pledgets will be tolerated at first; and it may even be necessary to remove these in a few hours. This will assuredly be the case, if there is much uterine tenderness, or hyperæsthesia of the intra-pelvic tissues. After a little time, however, it will generally be found that the parts become more tolerant of the treatment; then the numbers of cottons should be gradually increased, until the adhesive bands give way or stretch out sufficiently to permit the complete reposition of the organ.

The length of time required to accomplish this result must, necessarily, be variable; but most likely, success will be attained within a few months, if the method is regularly and

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presistently carried out. There are, no doubt, some cases which appear to belong to the incurable class; but, happily, they are exceptionally few in number. It will usually happen during the progress of a case treated in this manner, that the uterine tenderness, induration, and enlargement diminish, or perhaps disappear altogether; so, that, by the time the uterus can be replaced, the case is ready for a pessary. The use of this instrument should be commenced with more than usual caution. Now and then a hard-rubber support can be introduced at once, with the expectation that it will be well borne; but generally it is well to begin with a more flexible instrument. I have found the Albert Smith pessary made of steel spring, covered with soft-rubber, to serve a good purpose, in a large number of cases, for use during the period intermediate between the suspension of the cotton treatment, and the final employment of the permanent support. The Noeggerath cradle pessary, made of the same materials, is also a valuable instrument in a goodly number of cases. Finally, when all obstacles thereto have been overcome, a hard-rubber pessary of appropriate form may be adjusted, the daily use of the hot vaginal bath enjoined, and the patient instructed to return occasionally for examination, that the conduct of the pessary may be watched, and its use dispensed with as soon as its purposes have been served.

For the proper adjustment of a pessary in any retrodisplacement of the uterus, the knee-chest posture is simply invaluable. It is incomparably superior to any other position in the supervision of the pessary so necessary to its successful employment. The pessary, no matter how well fitted, nor how well it seems to keep its place, must be removed at intervals and the vagina thoroughly inspected, that any abrasions, erosions, or ulcerations which it may have produced, may be detected early. This inspection can be more thoroughly made in the knee-chest posture than in any other; for here, at a single glance, the eye sweeps over the entire field, detecting abrasions or reddened spots upon the epithelium, which the finger is not competent to note. If any such should be found, the use of the pessary must be temporarily suspended, and the cotton tamponade again resorted to until the parts are healed. It is, moreover, a good plan when such complications arise, to introduce a tampon steeped in a saturated glycerate

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of tannin, renewing these tannin tampons at brief intervals until all irritation of the epithelium is removed.

Suppose, in addition to the retroverted or retroflexed womb, we also have prolapse of an ovary; for it is, by no means, an uncommon circumstance to find one of these little bodies dragged down to the bottom of Douglas's pouch, and incarcerated between the fundus uteri andthe pelvic wall. If these abnormalities co-exist they will, speaking generally, have produced a chain of symptoms of a most distressing nature, ranging all the way along the hystero-neurotic series, from simple hysteria to absolute mania. To replace the dislocated ovary under these circumstances is, oftentimes, to afford instantaneous relief. The most effectual, safest, and best method of replacement, is through the medium of the genu-pectoral posture. The reversed gravitation of the abdominal viscera with a little assistance *a tergo* will, in many instances, carry uterus and ovary to their places.

If, however, there are adhesions the replacement becomes a much more difficult problem. The moorings must be broken up, or stretched out, sufficiently to permit the ovary and womb to return to their proper places, before any hard or permanent support can be made available. The persistent and repeated tamponade of the vagina with the cotton pledgets, soaked in glycerated tannin, carbolated glycerine, or plain glycerine, as the case may be, will generally succeed in accomplishing the end sought in a few weeks or months. If the ovary is tender and sensitive, with hyperæsthesia of the subjacent parts I have found it a good plan to moisten one or two bits of cotton with the following mixture:

℞	Chloral hydratis,	ʒ ij.	8	65
	Acidi carbolici,	gr. x.		
	Ext. opii fluidi,	ʒ ij.	60	
	Glycerinæ,	ʒ ij.	60	
	Misce.			

One drachm of the mixture carried up against the ovary on the cotton and snugly held in place by dry pledgets, furnishes a good foundation for the cotton column. These medicated cotton supports can ordinarily be worn forty-eight hours, when they should be removed, and the vagina thoroughly cleansed with the hot douche, after which it should be repacked as before; and the treatment should be continued, until the hyperesthetic tenderness is sufficiently overcome to permit the em-

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ployment of the permanent support, unless, perchance, the cure has already been accomplished; a circumstance by no means improbable. The adjustment of a proper pessary in these cases is, very frequently, a difficult task. It is not sufficient for the pessary to retain the womb well in place, but it must be of such a conformation as to support the ovary in proper position also, while, at the same time, it must not impinge upon the rectum in a manner to interfere with, or render painful, the act of defecation. It has happened to me more than once, in earlier years, after careful and complete reduction of a retroverted uterus, and, what was supposed to be, an equally careful adjustment of a pessary from which I confidently expected the most satisfactory results, to have the patient return in a few hours complaining of agonizing pain in the pelvis, which necessitated the removal of the pessary. The cause of this disappointment and chagrin, then so difficult to understand, but now so simple of explanation, was this: The ovary had slipped down behind the posterior segment of the pessary, becoming imprisoned between it and the sacrum, and the resulting compression of the already over-sensitive and congested organ caused unendurable agony. It is not germane to the aims of this paper to discuss the whole subject of pessaries, but this point is deemed of sufficient importance to warrant, in passing, a brief reference. Finally, it is highly probable that, in some cases, the whole list of pessaries will be searched over in vain, for one which will fulfill the indications of treatment and, at the same time, be painlessly worn. Such a case should be relegated to the tampon, which must be continued in use until the cure is complete, or the symptoms have sufficiently abated to warrant the discontinuance of further treatment.

The following cases are subjoined, as illustrating some of the principles advocated in the preceeding remarks:

CASE I.—Miss A. B——, aged thirty-two years, for several years had had retroversion of the womb. Treatment by several physicians who had adjusted pessaries on different occasions; but their use had been as often discontinued, owing to the pain which they produced by reason of the extreme sensitiveness of the parts. She suffered from many of the hystero-neurotic symptoms pertaining to such cases, some of them extreme in character. Menstruation was usually preceeded by

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a most distressing attack of hysteria; there was constipation, indigestion, meteorism, headache, backache, pain extending down the left thigh and leg; she was moody, irascible and melancholic. Digital examination revealed retroversion in the second degree. The slightest pressure upon the body of the uterus caused insufferable pain. There was, also, displacement with imprisonment of the left ovary which was, likewise, extremely sensitive to the touch; but there were no adhesions. In the genu-pectoral position the uterus and ovary went to their places with comparative freedom, and a thorough, regular, and persistent tamponade of the vagina was immediately commenced. This treatment was kept up for five months, during which time there was scarcely a return of the hysteria. The method was supplemented with the hot vaginal douche, tonics and galvanism, under which plan the general health steadily improved, when a permanent support was adjusted and worn with comfort.

CASE II.—Miss C. D——, aged 35, consulted me in the autumn of 1878, having been, for ten years previously a sufferer from uterine diseases of one form and another, and for which, during the greater part of the time, she had been under the care of a number of different physicians. The uterus was retroverted, enlarged, somewhat indurated, tender to the touch, and moored to the pelvic wall by left lateral adhesions. Her physical condition was pitiable; the hystero-neurotic phenomena were of the most exaggerated kind; there was confusion of thought, brain oppression, sleeplessness; constipation, disturbance of digestion, intolerance of even slight noises, such as the rustling of a newspaper, or the "singing" of locusts; amenorrhœa, anæmia, dread of society and melancholia. This patient complained that the knee-chest posture increased the discomfort in the head, therefore I commenced the treatment in the Sims position. At first but three cotton pledgets were placed in the post-cervical space, and even these were removed in the course of a few hours on account of the uncomfortable pressure which they produced. They were, however, renewed next day, moistened with one drachm of the sedative mixture mentioned in the text, when they were better tolerated. From this time the number of pledgets was gradually increased, and after a few weeks the genu-pectoral posture could be assumed without much discomfort. This

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course was pursued with tolerable regularity for nearly a year before a pessary was attempted. Finally, the moorings became sufficiently loosened to allow the uterus to float to its place, and a Noeggerath soft rubber pessary introduced. This form of support was worn, with an occasional rest, during the succeeding four months, when an Albert Smith hard rubber pessary was adjusted which has been worn, for the most part of the time, down to the present. The treatment has been varied by occasionally laying aside the pessary for a short period, and the resumption of the tamponade during its suspension. The hot vaginal douche has played an important part in the management of this case from the first, and has been self-administered in the dorsal position, the patient being provided with an apparatus for that purpose. Iron, arsenic, and galvanism have also, it is believed, been supplementary aids of considerable potency, in contributing to the favorable results; for, though the patient cannot be regarded as *completely* restored to health, she is so much improved as to be regarded comparatively well. The hystero-neurotic symptoms have nearly vanished; the constipation is at an end; digestion is good; menstruation nearly normal; and the functions of the body so well performed, as to convert a heretofore burdensome existence into a life of comfort and happiness.

CASE III.—Miss E. F——, aged 28 years, came under observation in September, 1879, with retroflexion of long standing. For eight years she had suffered with dysmenorrhœa; there was partial acquired cervical stenosis; great tenderness of the uterine body; cicatrices across posterior wall of the vagina; and various neurotic disturbances not necessary to enumerate here. This patient had received "local treatment" at the hands of various physicians of both sexes, and had worn a pessary; but she was now despondent, skeptical, and discouraged. In the genu-pectoral posture the uterus assumed its normal relations with bladder and rectum quite readily, and I, therefore, immediately began a systematic tamponade with the medicated cotton pledgets, which was continued with great regularity for eight months. In the meantime the cervix was divided bi-laterally, and the patency of the os maintained by the use of Hanks's dilators; and this latter treatment had the further effect to partially straighten the flexion. A soft-rubber pessary of the Noegge-

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rath pattern was first adjusted, worn for a time, and afterwards an Albert Smith soft support for a few months longer. Finally, a hard-rubber pessary, also of the Albert Smith pattern, was introduced, which is still in use. This patient is a person of unusual intelligence in regard to her own case, understanding its mechanism perfectly, and has been most faithful in carrying out all instructions. She uses the hot vaginal bath in the dorsal position, and frequently employs the genu-pectoral posture herself, whenever, indeed she feels the necessity therefor; and this has, I cannot doubt, been of great supplementary aid in the management of the case. The result may be thus summarized: First, entire recovery from the dysmenorrhœa for, whereas, at the outset she was obliged to take the bed for three or four days during each menstrual epoch, and suffered agonizing pain nothwithstanding, she is now enabled to go about her domestic and social duties during this time, and is entirely free from all extraordinary pain. Second, great improvement in the general health; and, third, disappearance of all uterine and vaginal hyperæsthesia.

CASE IV.—Miss G. H——, 21 years old, consulted me in July, 1878. She had a profuse catarrhal leucorrhœa for which I prescribed in a tentative way, postponing, for the time being, a physical examination. Finding no improvement after a few months, she submitted to the usual examination, which revealed retroversion with prolapse of the left ovary. The usual tamponade of the vagina in the knee-chest posture was instituted and, after a few months, a pessary fitted, which she wore until marriage and pregnancy, when I removed it. This case steadily improved from the beginning of treatment, neither the tampon nor the pessary having occasioned the slightest inconvenience or discomfort.

CASE V.—Miss J. K——, aged 24 years, had been four years an invalid when she consulted me, during which time she had employed thirteen different physicians. She was, at each menstrual epoch, subject to hysterical outbursts of an exaggerated phenomenal character. She would shut herself in her room, permitting no one to enter, and abandon herself to the most maniacal actions and utterances imaginable. She would shout at the top of her voice, cry, laugh, break the furniture, and tear her clothing; again she would refuse to speak, declining all kindly offices and attentions on the part of physi-

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cian, nurse or kin, and commit herself generally to the "sulks." During the intermenstrual period she was "everything by turns and nothing long;" irritable, petulant, moody and irascible, but not violent; while at other times she was cheerful, amiable, and comparatively happy. Recognizing the hystero-neurotic character of the symptoms, and their consequent relationship to sexual disturbance, I prevailed upon her to submit to a physical examination of the pelvic organs. The uterus was retroverted, somewhat under-size, and tender; there was cellulitis of the broad ligament, while the left ovary was prolapsed and incarcerated behind the fundus uteri. There was no leucorrhœa, and the vagina was narrow and short. This examination was made in the Sims position. Placing the patient in the knee-chest posture, moderate digital pressure in the post-uterine space carried the fundus and ovary, over the promontory of the sacrum to their proper places; whereupon I proceeded to occupy their former site with the cotton pledgets medicated with the sedative mixture heretofore mentioned. The cotton column was builded upon this foundation in the usual manner. This treatment was regularly carried on for four months, with the effect to cause an abatement of the hysterical phenomena, and a general improvement in her physical condition as well.

This patient was exceedingly averse to "local treatment," wherefore it was difficult to persuade her of its necessity, and still more difficult to maintain regularity in the treatment; nevertheless, she was held to entire faithfulness for four months. At the end of this time, having improved so much as to consider herself well, and, moreover, having obtained the opinion of another physician to the effect that she required no uterine treatment whatever, she passed from my observation.

Conclusions.

In the narrow limits of time which it would seem proper for me to appropriate, it is impossible to compass the entire field of possibilities of the genu-pectoral posture, in its applicability to the treatment of uterine and ovarian displacements. I have, therefore, simply sought to draw attention to the subject, in the hope that some of the learned gentlemen here present will afford us the benefit of their more enlightened views and riper

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experience, in this interesting and important field of observation.

In concluding, permit me to offer the following abstract of some of the principles, which observation and experience would appear to teach, in regard to the utility of the genu-pectoral posture in the treatment of retro-displacements of the uterus, and in dislocations of the ovaries:—

I. That, in a large number of cases of uncomplicated retroversion, or of ovarian prolapse, the combined action of gravitation and atmospheric expansion of the vagina, obtained through the medium of the knee-chest position, will effect replacement without instrumental aid, such as the sound or the various repositors. Some cases in this class may, however, require slight manual assistance.

II. That, in cases when there is fixation of the fundus uteri in the hollow of the sacrum, without adhesions, the tamponade of the vagina with the cotton pledgets furnishes a most complete and simple way of overcoming the mal-position.

III. That, in cases of retroflexion with fixation due to plastic exudation or adventitious deposits, the products of cellulitis or other inflammations of the intra-pelvic viscera, and associated with prolapse and incarceration of one or both ovaries, the genu-pectoral posture affords the most rational way of treatment with reference to the removal of the conditions named, and thereby to ultimately obtain reduction; for, in this position the vagina can be most completely packed with the medicated tampons, which, by their gentle pressure, reduce inflammation and promote absorption.

IV. That retroflexions of the womb, after a course of treatment by the vaginal tamponade in the knee-chest posture, are more readily straightened and are rendered more tractable. The influence of the tampon, by pressure and otherwise, seems to soften the indurated and gristly cervix, thus preparing it for further treatment, and sometimes, even, rendering further interference unnecessary.

V. That in prolapse of the ovaries, replacement can be more readily obtained in the genu-pectoral position. Gravitation alone is, oftentimes, sufficient to effect reduction of these organs; moreover, they are frequently so tender and sensitive that any other method of replacement would be torture to the patient, while it is painlessly accomplished by this method.

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The support of the replaced ovary by the vaginal tamponade for a considerable period will, even in a large proportion of cases, be sufficient to accomplish a cure; while in cases where uterine dislocations co-exist this method of treatment serves a double purpose in ministering to both conditions.

VI. That the adjustment of pessaries is more accurately accomplished, and with less discomfort to the patient, if done in the genu-pectoral posture. The complete reduction of the displaced uterus, or ovary, or both, is a condition precedent to the successful employment of these instruments; and, in this posture, such reduction is *absolutely possible*, while it is not the case, to the same degree of precision, in any other position which may be chosen for the introduction of the pessary. The replacement once accomplished, what more favorable condition could be desired for the introduction of a support, than while the forces of gravitation and air-pressure are conspiring to simplify this otherwise difficult proceeding? The law of gravity on the one hand, operates in holding the heretofore displaced organs securely in their appointed places, while on the other, the vaginal inflation serves to bring the parts within the range of vision so completely, that the size and shape of the pessary required can be most accurately estimated.

A pessary carefully selected with reference to the peculiarities of a case and fitted in the knee-chest posture, will seldom require removal, except from causes other than such as pertain to the manner of its adjustment. Here the pessary is not pushed up against a tender and irritable womb (and ovary, perhaps,) but is simply laid gently upon the parts, causing no pain and rarely any discomfort; for the instrument will move about loosely in the expanded vaginal vault. After the pessary is placed the patient is brought to the erect kneeling posture, the finger, meanwhile, maintaining its hold upon the anterior segment thereof, until the abdominal and pelvic viscera gravitate back to their proper level.

A final digital inspection of the pessary, *in situ*, can now be made, that the accuracy of the adjustment may be proven.

VII. That the self-assumption of the genu-pectoral posture by the patient each night, or even at other times during the day if necessary, may be made a serviceable adjunct to the treatment, in relieving the pressure of the uterus upon the pessary, by taking off the weight of the superincumbent viscera.

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The patient should lie in the prone or semi-prone position for sometime afterwards, avoiding the erect posture, at all events, for a few hours. In this manner much may be accomplished in the way of relief from backache, intra-pelvic pains, cystic or rectal irritation, and other phenomena usually attendant upon these maladies, when it is convenient or impossible to consult the physician with regularity. The patient may, indeed, be taught to remove the pessary, cleanse the vagina with a copious hot water injection, and to replace the instrument herself, assuring its proper adjustment by a resort to the genu-pectoral posture.

Furthermore, the frequent self-assumption of this position establishes the "habit" of replacement of the intra-pelvic organs and, by unloading the vessels, relieves hyperæmia, congestion and pelvic blood stasis.

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VI.—SYPHILITIC DISEASES OF THE LACHRYMAL APPARATUS.

BY CHARLES STEDMAN BULL, A. M., M. D., OF NEW YORK.

Syphilitic Lesions of the Lachrymal Gland.

Diseases of the lachrymal apparatus due to constitutional syphilis have hitherto met with but little attention on the part either of the ophthalmologist or syphilographer. If we consider the lachrymal gland alone, we shall find that scarcely any mention is made of syphilitic lesions of this organ throughout the whole range of medical literature for the past two hundred years. For this there must of necessity be some good reason, and it is found in the fact that a lesion of the lachrymal gland due *directly* to syphilis, and not as a consequence of a lesion in some neighboring organ or structure, has been but once reported.

It is here necessary to bear in mind the importance of distinguishing between two varieties of syphilitic lesions, viz: between those lesions which are met with directly or primarily, as it were, in the organ under discussion, and those which occur indirectly or secondarily in the organ as a consequence of lesions in the neighboring parts.

Of lesions due to constitutional syphilis, and primarily arising in the lachrymal gland, there are but two cases mentioned in literature, and even these are not clearly settled. Several of the older writers speak in a general way of chronic inflammation of the lachrymal gland, dacryoadenitis, as

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sometimes due to syphilis, and a case is mentioned by Chalons under the names of "adenitis lachrymalis syphilitica," and reported in the Preuss, Vereins-Zeitung, for 1859. The patient was in the first year of constitutional syphilis, and was suffering from iritis and some extensive lesion of the skin. Both lachrymal glands became very much swollen and pushed the upper lids forwards. The gland on the right side was more swollen than that on the left side, and produced an appearance of ptosis. There was no pain at any time, nor any sign of active inflammation, and the infiltration subsided, as did all the other symptoms, under mercurial treatment. The inflammation in this case was probably of a plastic character, similar to what occurred in the iris, and such as was to be expected at this stage of the disease. Bader says vaguely: "syphilitic enlargement of the lachrymal gland has occurred," (See The Natural and Morbid Changes of the Human Eye. London, 1868.) On the other hand Förster says that syphilis affects all the parts of the organ of vision, except perhaps the lachrymal gland, (See Græfe und Sæmisch, Handbuch der gesammten Augenheilkunde, VI., 1877.) Another case somewhat similar in character, was observed by Sichel, and has been quoted by Variot in an inaugural thesis entitled "Contribution à l'étude de la dacryoadénite aigne." Paris, 1875.

It might be conceived that owing to its situation the lachrymal gland might become inflamed as a consequence of periostitis of the orbit. The inflammatory process might extend from the periosteum to the fibrous envelope of the lachrymal gland, the one being closely connected with the other, and thence to the trabeculæ in the interior of the gland. One such case has come to the notice of the writer. The patient was profoundly syphilitic and subsequently died of meningitis and gummy tumor of the dura mater. The lachrymal gland was enlarged and inflamed as a consequence of general inflammation and infiltration of the orbital tissues, spreading from a diffuse orbital periostitis. There was excessive exophthalmus, and the eyeball and the entire contents of the orbit were enucleated to relieve the excessive pain. The lachrymal gland was found generally enlarged, the hypertrophy however being mainly due to an increase of the connective tissue elements of the gland, and not to an increase of the glandular structure proper. The lachrymal gland seems

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to be singularly exempt from inflammatory accidents of any kind. There are very few cases reported in spite of the enormous activity displayed of late years in the field of ophthalmology. It may be the seat of a neoplastic growth, both benign and malignant, but no case of gummatous infiltration, circumscribed or diffuse, in this region, has as yet been reported.

Syphilitic Lesions of the Lachrymal Caruncles.

It is conceivable that the lachrymal caruncle might be affected by syphilis secondarily, as in the extension of a simple conjunctivitis, frequently occurring in the early stages of inflammation, or of a conjunctival ulceration from a broken down papule or tubercle. The caruncle might also become inflamed as a consequence of inflammation of the lachrymal sack, and would probably become involved in cases of caries and necrosis of the lachrymal bone, due to syphilis. The first change would be an hypertrophy which would probably be followed by atrophy and perhaps by entire disappearance of the caruncle. But no case of syphilitic disease occuring primarily in the caruncle had been reported until Dr. R. W. Taylor, of New York published an account of two cases, occurring in his own practice, in the American Journal of the Medical Sciences, for April, 1875. These cases are so rare that they will be reported in detail, in almost the doctor's own words. The first case was a man, aged 29, who became syphilitic in the latter part of 1865, having a chancre, followed by a general eruption, buccal mucous patches, and rheumatoid pains. His strength became very much reduced and his health profoundly affected. During the following year he was treated at irregular periods by various physicians for superficial ulcers of the dorsum and sides of the tongue, and severe pains in his joints. Early in 1867 he had a general rupial eruption over the body and extremities, and upon the forehead a string or row of syphilitic tubercles. They were slightly elevated, quite broad, of a coppery hue, and the seat of slight epidermal exfoliation. In the fall of 1868, he noticed coincidently with the appearance of his syphilides, a swelling or tumor at the inner angle of each eye. An examination showed each caruncle to be enlarged to four times its normal size, so that they protruded between the closed lids. They

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were deep red, firm to the touch, and entirely independent of any conjunctival inflammation, and of any disease of the lachrymal sack or bone. Dr. Taylor's diagnosis was gummy infiltration, in which he was without doubt correct. An operation was subsequently done by an ophthalmic surgeon for their removal, which resulted in considerable deformity.

The second case was a man, aged 34, with no distinct history as to the occurrence of the initial lesion, but with a clear history of constitutional syphilitic lesions. In February, 1868, he had a copious rash upon his body, palms of the hands and soles of his feet, and his scalp had been covered with scabs. These disappeared with proper treatment, and he remained free from eruptions till November, 1869, when some spots appeared upon the arms, hips, one leg and the scalp. Shortly after this he observed a swelling at the inner angle of each eye. These tumors resembled those in the first case, except that they were slightly broader at the base, and half an inch in height, so that they protruded markedly between the edges of the closed lids. There was no ulceration of the surface, and they were firm to the touch. A careful and persistent use of the mixed treatment in a short time produced a diminution in the height of the swellings. They gradually declined in their whole extent, and in ten months the caruncles were reduced to their normal size. Unfortunately the reduction in size still continued and resulted in atrophy of the entire caruncle.

These two cases, occurring coincidently with other late syphilitic lesions, indicate that the caruncles were the seat of a gummy infiltration. Like such growths elsewhere their course was painless and chronic, and without any signs of an inflammatory character. They followed the ordinary course of gummy tumors, and were symmetrical as is often the case in the late lesions of syphilis.

Syphilitic Lesions of the Lachrymal Passages, Including Canaliculi, Sack and Nasal Duct.

When we come to consider the lachrymal excretory passages, we find that syphilitic lesions are not at all uncommon, especially in the lachrymal sack and nasal duct. These lesions are manifestations both of early and late constitutional syphilis, and though they are usually accompanied by some other symptoms elsewhere in the body, these are not usually cutaneous lesions.

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Beginning with the canaliculi, including the puncta, we find that the form of conjunctivitis so often seen with syphilitic iritis may spread to the tear channels in the lids, through the puncta, and cause a catarrhal inflammation which soon narrows the calibre of the canal or of the puncta, and prevents the drainage of the tears. As a result there is constant epiphora or overflow of tears, which keeps the edges of the lids and the external surface of the lower lid constantly irritated. This same catarrhal inflammation may extend through the canaliculi to the sack and cause a dacryocystitis, though usually inflammation of the sack originates in trouble in the nasal duct, which has spread from the nose. Another lesion of the conjunctiva or edge of the lid which may involve the punctum and canaliculus is a chancre occurring in this locality, and several such cases have been reported. In two cases seen by the writer, the punctum and canal were obliterated by the ulcerative action, and more or less epiphora was the permanent result. Another conjunctival lesion, symptomatic of a later stage of constitutional syphlis, which may and not unfrequently does involve the canaliculus, is a papular or tubercular syphilide, occurring in this vicinity and generally beginning on the margin of the lid. If no proper treatment of these syphilides be undertaken, they break down, ulcerate and prove destructive of more or less tissue in their vicinity, and thus may cause complete destruction and obliteration of one or both canaliculi.

As before remarked, inflammation of the conjunctiva and canaliculi may extend to the lachrymal sack and excite a dacryocystitis, at first of a catarrhal character, but which later may become more or less purulent. But this is not a common result, for though inflammation of the lachrymal sack is not a rare manifestation of syphilis, the course of the disease is usually in the reverse direction, from the nose through the nasal duct, into the sack. Moreover, it is not common to meet with a purulent dacryocystitis, unless there is present disease of the periosteum or endosteum of the nasal duct, or carious disease of the bony canal or of the lachrymal bone. In some cases it is possible that the focus of disease started in a periostitis or endostitis of the nasal duct, independent of any disease in the nose, as a result of constitutional syphilis, and spread to the mucus membrane lining the duct and sack,

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thus causing the dacryocystitis. This periostitis may and usually does tend to caries of the underlying bone, if not properly and promptly treated; or it may be sluggish and chronic in its course and be accompanied by the development of a subperiosteal gumma, which would entirely obliterate the calibre of the duct. The occurrence of these gummata developed in the wall of the nasal duct, is, in the opinion of the writer, not very uncommon. Another source of obstruction in the duct and which acts as an indirect cause of inflammation of the duct and sack, is the occurrence of a mucous patch on the wall of the nose at the mouth of the duct which closes the orifice. This the author has seen in two instances, in both of which there was a marked and extensive development of mucous patches in the buccal cavity and on the vulva and anus.

The obstruction to the course of the tears in their downward flow, may occur at any point of the duct, from its union with the lachrymal sack to its opening on the side of the nasal meatus. Critical observation of a large number of cases has led the author to believe that in syphilitic patients this obstruction usually occurs at or near the mouth of the duct. But though in the majority of cases the obstruction begins here, it is by no means confined to this spot, but tends to spread upward towards the sack, so that the stricture may in time nearly equal the duct in length. This stricture of the duct, when membranous in character, may remain so to the end, and is amenable to treatment. But if the periosteal lining or fibrous wall of the duct be involved in the inflammatory process, or the bony wall be diseased, the treatment becomes a much more serious matter, and its duration, under the most favorable circumstances, very chronic. In some instances the duct becomes obliterated so far as its lining membrane is concerned, its walls having become adherent throughout. Usually before this stage has been reached the lachrymal sack has become inflamed, and the dacryocystitis has developed into an abscess and opened externally just beneath the internal canthal ligament.

The symptomatology of dacryocystitis and stricture of the nasal duct, due to syphilis, differs in no respect from that of the same diseases due to other causes. There is first epiphora or an overflow of tears more or less marked, then a sense of

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distension in the neighborhood of the lachrymal sack, followed by a distinct swelling in this region. Pressure with the finger at this point causes an evacuation of glairy mucus or muco-pus through the lachrymal puncta into the conjunctival cul-de-sac. This condition may remain unchanged for an indefinite period, or the low grade of catarrhal inflammation in the sack may assume the acute form, become purulent, the overlying connective tissue between the external wall of the sack and the skin becomes infiltrated and brawny, the skin becomes adherent, and finally all the tissues ulcerate, the abcesses opens externally and a fistula of the lachrymal sack is the result. As a matter of clinical observation, this is, however, not a common result of syphilitic disease of the duct, unless there be caries of the lachrymal bone, or of the nasal process of the superior maxillary bone. The longer, however, the sub-acute or chronic stage lasts in the duct and sack the greater is the probability of the bones becoming diseased, and this is especially so if the patient is in the late stage of constitutional syphilis. Nasal disease may be the only manifestation of the constitutional disease, and not uncommonly is so. Syphilis, as it advances into the late stages, seems to lose its diffusible properties, and thus to acquire a more energetic and destructive concentration of power to the injury of whatever organ may be affected. But syphilitic disease of the nasal duct is not always the solitary sign of constitutional syphilis; on the contrary, in most cases it is merely one of a group of lesions occurring in various parts of the body, sometimes connected with the development of gummata, and usually with bone disease elsewhere. Though ordinarily occurring as a late manifestation of syphilis, the lesions in the nasal duct may be precocious, appearing contemporaneously with the first signs of constitutional infection. Clinical observation teaches that disease of the pharynx or palate is usually present at the same time with disease of the nasal duct, but this does not necessarily complicate the prognosis or the duration of the necessary treatment.

Whether syphilis of the duct be precocious or postponed, the course is always about the same, if the case be not submitted to appropiate treatment, from ulcerative inflammation of the mucous membrane lining the nose and duct to carious disease of the bones and more or less obstruction or obliteration of the

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calibre of the duct. Mucous patches are much less frequent in the nose than in the mouth and pharynx. They are usually confined to the inner surface of the alæ of the nose, to the septum nasi, or to the anterior ends of the inferior turbinated bones. They probably do not occur in the upper nasal cavities and are generally visible to the eye. They are almost always erosive in their nature and may tend to ulcerate superficially, but they do not tend to deep destruction of the tissues. Under proper treatment they cicatrize without leaving any trace of their presence, except in the secondary lesions caused by them in the nasal duct. These lesions may be complete destruction of the mucous membrane lining the duct, more or less destructive ulceration of the periosteum, and consequent caries, more or less extensive, of the bony walls. Here the syphilitic disease attacks the bone in one or two ways. First there may be a congestion rapidly followed by a molecular destruction of the bone tissue; in other words, ostitis and caries. This form of bone lesion frequently coincides with serpiginous ulceration of the mucous membrane lining the sack and duct, and soon destroys the lachrymal bone and upper end of the nasal process of the maxillary bone. With this form of disease there is usually an abundant secretion of ichorous pus through the canaliculi or through the fistula in the walls of the sack. The secondary process is a pure necrosis in which the bone becomes more profoundly diseased, and distinct sequestra of varying size are detached. These rarely come away of themselves, but require operative interference for their removal. This form of bone lesion may be a primary one in the superior maxilla and is the cause of those cases of total obliteration of the nasal duct which are sometimes met with. The destructive process here is much more profound, and the calibre of the duct is obliterated by the falling together or caving in of its walls and subsequent adhesion of the bony surfaces by inflammatory action.

Another form of syphilitic lesion which is said to occur in the lachrymo-nasal canal is an osteo-periostitis gummosa of very rapid development and ending in suppuration. The author has not seen any such cases, but their occurrence is mentioned by Panas. (See Legons sur les affections de l' appareil lachrymal. Paris, 1877.) The development of these gummy growths in the wall of the sack and duct seem also to

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be proven by testimony of Galezowski and Larebière. The obstruction in the duct would of course be very rapid, owing to the incompressibility of its walls and the small size of its calibre.

One other form of syphilitic lesion of the lachrymal passages remains to be considered, viz: hyperplastic processes in the bones themselves, which aid in forming these channels; or exostoses or periostoses of the lachrymal bone and of the bony wall of the nasal duct. One of the first to call attention to these bony outgrowths was Tavignot. (See Journal des Connaissances médico-chirurgicales, January, 1848.) This author states that lachrymal tumor followed by fistula, may be caused by a hyperostosis of the superior maxilla, especially of its ascending apophysis. He does not make the necessary distinction between hyperostosis and exostosis however. He says that this bony outgrowth, be it exostosis or periostosis, does not always occur solely in this part of the superior maxilla, for it has been met with in the angular apophysis of the frontal bone, and even in the lachrymal bone. These exostoses ulcerate and become carious, or the bony walls of the lachrymal canal approach each other, the lining fibro-mucous membrane becomes inflamed, ulcerates and is destroyed, and in this condition the case is irremediable. Carron du Villards also refers to narrowing and obliteration of the nasal duct by periostosis, exostosis and hyperostosis of the bones entering into its formation. (See Himly: Die Krankheiten und Missbildungen des Menschlichen Auges; Berlin, 1843.) L. A. Desmarres states that these exostoses almost always occur on the ascending apophysis of the superior maxilla. (See Maladies des Yeux. Paris, 1854.) Richet reports the case of a woman, who had had the initial lesion about fifteen years before, in whom two years before there had appeared a swelling at the level of the root of the nose and supra-orbital ridge. He diagnosed a periostosis of the ascending apophysis of the superior maxilla and nasal bone. In this case the sack was laid open and an examination showed that the inflammatory process had originally started in the fibrous wall or periosteum, and that the bony growth was a secondary result. (See Thèse de Doctorat; Paris, 1870.) Another case reported in the same thesis occurred in the service of Gosselin. Lagneau and Bourgeois have also reported cases, and the former cites Janin as being

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the first author to report a case of this nature. (See Archives Générales de Médecine, 1857.) Demours speaks of an interesting case in his experience, where there was a small exostosis situated at the inner margin of the orbit, immediately in front of the lachrymal sack, which produced constant epiphora and eventually inflammation of the sack. (See Précis historique et pratique des maladies des yeux, Paris, 1821.)

Treatment.

This varies somewhat, according to the stage of constitutional infection and the severity of the lesion. If the latter be a simple inflammation of the lining of the canaliculi or sack, which has spread from a conjunctivitis which is so commonly associated with syphilitic iritis, nothing more is required than a simple, mildly astringent lotion locally, and the cautious administration of mercury in some form, either in the form of inunction, 4 grams (℥j daily), or in the form of the mild chloride 20 mgm. to 30 mgm. (gr. $\frac{1}{3}$ to gr. $\frac{1}{2}$), every three hours; or in the form of the corrosive chloride, 2 mgm. to 3 mgm. (gr. $\frac{1}{30}$ to gr. $\frac{1}{20}$), three times a day. If iritis is present the main treatment is directed towards the latter, and no special treatment is indicated for the condition of the lachrymal passages.

If the inflammatory action is more severe, leading to the secretion of a glairy mucus or muco-pus, with a swelling over the seat of the sack, and there is good reason for suspecting a stricture of the duct, from whatever local cause in the nose, do not resort to operative interference until internal medication has been tried faithfully. Ophthalmic surgeons are too prone to slit up the canaliculi and incise a stricture of the nasal duct with a Weber's or a Stilling's knife in cases of syphilitic origin, deeming medical treatment useless in such cases, before even giving it a trial. The use of mercury here must be more prompt and its effect must be more rapidly produced, or the disease may extend from the lining of the canal to the bony walls. A very excellent method of administering mercury in these cases is to use 8 grams (℥ij) of mercurial ointment by inunction upon the inner aspect of the arm or side of the chest, and at the same time give the mild chloride internally in doses of 10 mgm. to 15 mgm. (gr. $\frac{1}{6}$ or gr. $\frac{1}{4}$) every hour or two, carefully watching for the first symptoms of the action of

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the drug. In many cases a beneficial effect upon the lesion will be observed on the third or fourth day, and then the mercury may be either entirely discontinued, or given in smaller doses at longer intervals. In many of these cases complete recovery follows such a course of treatment, all signs of inflammation and obstruction in the duct disappear, and the patency of the duct is restored without any incision or probing.

If the case is a chronic one, and there is reason for supposing caries of the bony wall of the duct, or of the lachrymal bone, the main reliance is to be placed upon the potassium iodide, which should be given at first in moderate doses, beginning with gram 0. 6 to gram 1 (ten or fifteen grains,) and maintaining it at this dose for a length of time, or rapidly increasing the dose up to the limits of toleration; being guided in our action by the severity of the case and the idiosyncrasy of the patient. Even in cases of long standing with perhaps a fistula of the lachrymal sack, and extensive disease of the bones, this treatment, if rationally begun and patiently persevered in, will in many instances effect a cure without the aid of knife or probe. In some cases of long persistent lachrymal fistula, from a previous abscess of the sack, which has opened upon the face in the angle between the lower lid and the nose, the writer has seen the patency of the lachrymal channels restored and the fistula partially close, under persistent appropriate treatment without any operative interference. Usually in long-standing fistulae, the edges of the external opening become indurated and somewhat averted, and in such cases the edges have to be freshened and even pared and brought together with one or two sutures, before adhesion of the external lips of the opening occurs.

In some very protracted or virulent cases no treatment, internal or operative, will bring about a good result. These cases are examples of extensive destruction of bone, in which the calibre of the canal has become entirely obliterated, not because it is changed into a solid cord of connective tissue, but because the walls of the duct have become adherent from destructive inflammation and subsequent atrophy of the bone from caries. This usually occurs in the lower third of the canal, but sometimes this condition of affairs is met with near the point of union of sack and duct. The most that we can expect in these cases is to allay the purulent inflammation in

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the lachrymal sack by slitting up both canaliculi and washing out the sack with astringent and antiseptic solutions. If, in spite of this treatment, the suppurative process still continues, and the carious process in the lachrymal bone is not extensive, it is better to destroy the sack by the application of some powerful cauterizing agent, such as nitric acid, the galvano-cautery or the actual cautery. If there already exists a lachrymal fistula, the latter is to be laid open to the sack, the sack freely incised, and the cautery applied directly to its interior surface. If there is no fistula, the sack may be opened from the side towards the caruncle, inside the internal canthus, by connecting the incised canaliculi by a broad vertical incision, and the cautery applied to the sack, the edges of the opening being held apart for the purpose. This method of operating was first advised and practised by Dr. C. R. Agnew of New York. Rather violent reaction follows, which however is easily controlled by iced applications; free suppuration follows, and the cavity generally closes in about three weeks. Epiphora remains for some time, but eventually even this diminishes and sometimes disappears entirely, possibly from compensatory atrophy of the secreting apparatus.

VII.—ON THE EFFICIENT DOSAGE OF CERTAIN REMEDIES USED IN THE TREATMENT OF NERVOUS DISEASES.

BY E. C. SEGUIN, M. D. OF NEW YORK.

MR. PRESIDENT AND GENTLEMEN: I have been led to prepare this paper by the following consideration. I frequently see uncured cases of nervous disease for which the attending physician has prescribed the proper remedy, but having exhibited it in doses which, though justified by medical authorities, were wholly insufficient to influence the disease, he has failed. This has been more especially true of chorea, of cerebral and spinal syphilis, of certain neuralgias. In these cases the physician had been wanting in the experience and in the courage necessary to fight his way through opposing tradition and book-authority to success.

There are several evident causes for this timidity, which, in

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a negative way, is nearly as injurious to the patient as too great rashness would be.

In the first place, the influence of teachers in medical schools and of writers of text-books is thrown in favor of small or medium doses. Few if any teachers or writers take special pains to indicate the maximal doses of potent drugs; they teach in a condensed form, and with an eye to the safe training of students. This is very well as applied to students, but a time comes when a physician in active practice wants to know just how much physiological effect can be obtained with certain remedies without positively endangering his patients' lives. In the present state of our medical literature, unless he have time and opportunity to hunt through the files of the leading medical journals for detailed observations, or to read monographs on experimental therapeutics, he must work out his maximal doses for himself at the cost of much time, of some anxiety, and of not a few failures.

It seems to me that works on therapeutics intended for the practitioner should give, for each important, physiologically active remedy, a paragraph on maximal doses, clearly indicating the amounts necessary to produce the physiological effects (on man), which are often inseparable from remedial effect. These data should be taken from monographs and special articles on the subjects by men who have had experience in the use of the drugs mentioned. For I take it as granted that it is now just as impossible for one man to give us a satisfactory, practical work on therapeutics, as it is for one to produce a uniformly excellent work on the practice of medicine.

In the second place I have observed that many capable druggists are alarmed at doses of certain remedies which are not only harmless, but essential to success. I clearly remember that when a student, I heard the late Prof. Freeman J. Bumstead relate, with a mixture of amusement and anger, how a leading druggist had sent to him to inquire if he really meant to give ʒiss[1] of bromide of potassium at one dose. This was twenty years ago. Yet, only a few days since, a patient told me that her druggist told her that she must have a very strong stomach to stand such powerful medicine (she was taking gm. 0.004[2] of biniodide of mercury and gm. 3[3] of iodide of potassium three times a

[1]Gm. 6. [2]Gr. $\frac{1}{16}$ [3]Gr. xlv.

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day, and under this in one week had lost nearly all her syphilitic pain). Very frequently I have had prescriptions for my usual doses of Squibb's conium returned for revision by the careful pharmacist. I intend nothing derogatory by these remarks, for druggists are supposed to know only the maximal doses of remedies as given by books, and they but do their duty in sending a prescription back for revision, if anything in it seems wrong. For my part, acknowledging a liability to error, I am always glad to see this healthy doubt applied occasionally to my prescriptions; yet I would not have physicians allow themselves to be influenced by the remarks or practice of druggists. Philosophically the professions are absolutely separate: the one furnishes the other with the proper implements of treatment in the best possible condition; and it is the function of the physician to determine by scientific knowledge and by experience how, when, and how much these implements shall be employed. In more senses than one the physician is responsible for the dosage of remedies.

In the third place, it has seemed to me that our large manufacturing drug-firms exert a baneful influence upon therapeutics. They have flooded the country with formulas and ready-made compounds, and thus relieved the physician of the necessity of exerting his power to extemporaneously devise the compound required for the individual patient before him. Increasing numbers of physicians, instead of adapting the materia medica to their patients, practically adapt their patients to an already-prepared stock of elixirs, pills, and mixtures. It is so convenient to order one of these, so much easier than to weigh the indications presented by the case, to estimate the patient's susceptibility, and then to write out a good prescription for the case, or more exactly speaking, for the patient.

I propose to briefly review the posology of a few drugs—giving the doses as stated by the best authorities, by writers on therapeutics, and by clinicians, and then stating the doses which I believe to be useful and safe.

I wish it particularly understood that in advocating larger doses of these remedies I do so only on the basis of a tolerably large experience, and not at all from any theoretical scientific considerations. At the same time that I advocate efficient

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doses, I am carefully observant of all the circumstances which render patients susceptible, and always make an allowance for idiosyncrasy. Thus, in first prescribing a potent remedy, I take into consideration the age, sex, and size of the patient; and also make an estimate of his general condition, and note particularly the state of his circulatory organs. Then, for a patient whom I see for the first time, I order very small doses, doses such as the books justify, and by steady increase feel my way, fearlessly because watchfully, to the larger doses, often seemingly dangerous doses, which really affect the organism and may cure the disease.

In this matter I make no claim to originality, and would not affirm that the doses I recommend are always essential to success; I simply sum up my experience and place my results at your service.

I.—FLUID EXTRACT OF CONIUM.

(*Extractum conii fructus fluidum.*—U. S. P.)

DOSES AS GIVEN BY AUTHORITIES ON THERAPEUTICS AND MATERIA MEDICA.

Is not mentioned by STILLÉ and MAISCH, by STILLÉ, by NOTHNAGEL, and by GUBLER.

WOOD.—Therapeutics (1880), p. 371. "Dose, ♏ 1 to 2. (!)"

BARTHOLOW.—Materia Medica (1880), p. 409. "Dose ♏ 2, ♏ 5, increased to ♏ 40."

RICE.—Posological Tables (1879), p. 28. "Dose, from 3 to 5 minims, to be increased with caution."

DOSES AS GIVEN BY CLINICIANS.

Conium, in the form of fluid extract, is not, to my knowledge, mentioned by any standard writer on the practice of medicine.

MEIGS and PEPPER, Diseases of Children (1870), p. 505, article chorea, refer to Dr. J. Harley's doses of succus conii with apparent astonishment.

To Dr. JOHN HARLEY, (The Old Vegetable Neurotics, London, 1867,) we owe the present rational or physiological use of conium. He swept away the former traditions of the potency of the drug, and showed that most of its preparations were inert. He obtained definite physiological and therapeutical results from the succus conii, administered in doses of from ʒ ii (gm. 8) to ʒ i (gm. 32). By means of these quantities

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he obtained the paresis of third nerves, arms and legs, which is the characteristic result of conium action of the spinal cord.

The prototype of our excellent officinal preparation, the fluid extract made by Dr. Squibb, was unknown to Dr. Harley until just as his book was going to the press. (Page 94, note.)

Dr. Squibb and Dr. Manlius Smith had, however, already read a paper before this Society, at its meeting in 1867, entitled: "An attempt to answer the question, Which part of conium is the best for medicinal use?" (See Transactions of the New York State Medical Society for 1867, p. 377.)

Ever since, we, on this side of the Atlantic, have possessed by far the most reliable and the most powerful preparation of conium; but I am sorry to add that it has been used rather inefficiently, and that even intelligent physicians are afraid to use the only doses which have any effect.

PERSONAL EXPERIENCE.

I have used conium a good deal in the last ten years, and have always employed the fluid extract as made by Squibb. I have tried it in chorea, in spasms of paralyzed limbs, in general irritability, and in insomnia.

When the indication is present, as in chorea, to obtain muscular relaxation, after a few tentative doses of 20 and 40 minims, (gm. 1.2—2.4.) I give at one dose 60, 80, or even 100 minims, (gm. 3.6—4.8—6.) These doses cause drooping of the upper lids (sometimes diplopia and paresis of the arms and legs. I do not repeat the dose until after the effects have passed off—in from 12 to 24 hours.

In a case of chronic adult chorea of 14 years' standing, which I almost perfectly cured in 1872—3, at the Epileptic and Paralytic Hospital on Blackwell's Island, a large part of the result (a very remarkable result in my experience) was attributable to paresis daily produced by a teaspoonful of Squibb's extract of conium for a month or more.

Many cases of insomnia, with wakefulness in the first part of the night, more especially those with fidgets or physical restlessness, are very much benefited by conium. I usually give 20 minims, (gm. 1.2) with 20 grains (gm. 1.3) of bromide of sodium in camphor water, at bed-time, to be repeated if necessary. In some cases (male adults) I

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give 50 to 60 minims (gm. 3—3.6) at one dose, not to be repeated. Such a sleeping-draught prescription has been repeatedly returned to me by druggists, because they thought the dose enormous. Indeed I usually warn patients that the druggist may comment on the dose.

If we have a clear indication to give conium, we ought to give enough to fulfill the indication, and this cannot be done without obtaining the physiological effects. With due precaution, there is a wide and sure distance between physiological and toxic effects, yet, with reference to remedies such as I shall refer to, how few physicians understand and appreciate that the curative effects are obtained in just that interval between physiological and toxic effects. To be successful we must be bold, as bold as physiological knowledge can make us, and yet as cautious in the first giving of powerful drugs to a patient as if we had no courage at all.

II.—FOWLER'S SOLUTION.

(*Liquor potassii arsenitis.* U. S. P.)

In this preparation, ♏j contains $\frac{1}{120}$ grain or gm. .0005 of arsenious acid.

DOSES AS GIVEN BY AUTHORITIES ON MATERIA MEDICA AND THERAPEUTICS.

STILLÉ and MAISCH, National Dispensatory (1879), p. 864, state only that the commencing dose is 5 drops (which is too much for some cases.)

STILLÉ.—Therapeutics (1874) Vol. II. p. 811. "Dose, 5 drops generally increased to 10 or twenty drops three times a day, largely diluted and taken after meals."

WOOD.—Therapeutics (1880), p. 385. "Average commencing dose is 5 drops in a wine-glassful of water after meals, to be increased." Page 382, "the dose must be steadily increased until œdema or other manifestations betray its decided action." [In chorea.]

BARTHOLOW.—Materia Medica (1880), p. 124. "Dose, from 2 to 10 minims. In this disease [speaking of chorea] large doses—5 minims *ter in die*—must be given." p. 130. (!)

RICE.—Posological Tables (1879, p. 45. "The dose is 3 to 10 minims and more, with caution."

NOTHNAGEL AND ROSSBACH.—Arzneimittellehre (1878), p. 212. "Dose, from 2 to 5 drops three times a day."

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GUBLER.—Leçons de Thérapeutique (1877), p. 100. "Dose, 5 to 20 drops per diem."

DOSES AS GIVEN BY AUTHORITIES ON CLINICAL MEDICINE.

AUSTIN FLINT, SR., Practice of Medicine (1881), p. 811, speaking of the treatment of chorea, says: "Fowler's solution is the most eligible preparation. Commencing with three or four drops three times daily, the dose should be gradually increased until the characteristic effects are observed."

Nothing is said of the mode of administration, or of the maximal dose. I must confess to a doubt whether this eminent teacher and practitioner does use really efficient doses, for he says, also on p. 811, "of the divers remedies indicated, none can be relied upon for promptly arresting the course of the disease, and it is doubtful if any exert a special curative agency."

C. B. RADCLIFFE, Reynold's System of Medicine [American edition, 1879], Vol. I. p. 712, article Chorea, correctly and fully describes, the progressive and fearless dosage of this remedy, increased from 5 drops after each meal to saturation of the system. If gastric derangement occurs, he suspends treatment for a while and then goes on. He quotes Dr. Begbie as giving it in the same way, and he has never known it to fail in 30 years.

MEIGS AND PEPPER, Diseases of Children (1870), p. 564, quote Radcliffe, and add, "Fowler's solution given in ordinary doses and immediately after eating, and steadily persisted in until some evidence of its constitutional effects are observed."

If these writers correctly express their meaning, simply "persisting" in ordinary doses (5 to 10 drops) is the proper method. But it is by just such a method that chorea may be perpetuated and a belief in the non-efficiency of drugs engendered in the physician's mind.

J. LEWIS SMITH, Diseases of Children (1880), p. 496, recommends equally useless doses of arsenic. "A child of eight years can take 5 drops, diluted in water, three times daily, after eating; and the dose may be increased if needed to eight drops."

HAMMOND, Diseases of the Nervous System (1881), p. 745, correctly describes the arsenical treatment of chorea by

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giving Fowler's solution *per os*, and by hypodermic injection.

The internal doses he increases by 1 drop every three days, which in my opinion is too slowly. He gives his preference to the hypodermic injections of diluted Fowler's solution in doses varying from 10 to 30 minims. (gm. 0.6 to 1.8.)

PERSONAL EXPERIENCE.

My own experience is in substantial accord with that of Radcliffe and of Begbie, in that I have almost never known arsenic to fail to cure chorea and often very quickly. I have almost always given Fowler's solution by the stomach in doses ranging from 3 to 30 drops three times a day.

It is exhibited largely diluted with water, usually half a tumblerful or from 3 to 4 ounces, (gm. 90 to 120) and given after food, although I am now inclined to think that the importance of this latter caution has been over-estimated, and is not as great as is that of proper dilution.

In children who are delicate and in sensitive adults I sometimes commence with a dose of 2 drops after each meal; more usually, however, with a dose of 5 drops. Each day I add 1 drop; thus: On the first day the patient takes 5 drops three times a day, on the second day 6 drops three times a day, the third day 7 drops three times, and so on.

Usually, when a dose of from 10 to 14 drops three times a day is attained, some arsenical symptoms appear; these are diarrhœa, nausea, vomiting, anorexia, redness and puffiness about the eyes; one of these symptoms or any combination of them. They are not serious, and during their prevalence I have never found albumen in the urine. My practice formerly was to go back to smaller doses when this condition developed and to again increase; but in the last two years I find it more advantageous to withhold all arsenic for forty-eight hours and then resume at the last dose and begin a further increase. A remarkable tolerance is now shown by most patients, even by young children; and doses of 20, 25, and even 30 drops thrice a day may be reached without a renewal of these symptoms.

I recently had a chronic and relapsing case of hemi-chorea in a girl fourteen years old which resisted doses of 34 drops three times a day, an equivalent of one grain (gm. 0. 06) of arsenious

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acid per diem. My directions as to physical and mental rest were disregarded by parent and patient, and this may account for the failure of the arsenic. Under the use of 2 grains (gm. 0.13) and 3 grains (gm. 0.19) doses of bromide of zinc the movements ceased within a month after the discontinuance of the arsenic.

I have been taught by experience not to expect amelioration of the choreic movements until the toxic effects of arsenic are evident; and in old, or relapsing cases, not until the second period of toxic symptoms. I nearly always combine rest, nearly absolute rest in bed, in severe cases, with the arsenical treatment and, if the patient be wakeful or nervous at night, an occasional bed-time dose of chloral hydrate *per os* or by enema, is given.

Simple, acute chorea may often be cured in two weeks' time by this plan, in positive contradiction to the too prevalent notions of self-limitation of chorea and skepticism as to the efficacy of drugs in this disease.

As regards possible ill-effects from this arsenical treatment, I would repeat that, though I have examined the urine of many patients at the periods of saturation by arsenic, I have never found albumen or tube-casts. Stomatitis I have seen but once, in the case of a physician's son, whose chorea was very rapidly and permanently cured by moderate doses (about 18 drops three times a day). Cutaneous symptoms I have never met with; and the gastro-intestinal irritation has never been serious or permanent.

My experience with the hypodermic injection of Fowler's solution is more limited. I have made use of it in chronic chorea, and in local choreiform affection, and I would agree with Dr. Hammond in his statement that we relatively obtain less constitutional disturbance and more curative effect from this method.

III.—CRYSTALIZED ACONITIA OF DUQUESNEL.

(*Aconitia.—U. S. P.*)

DOSES AS GIVEN BY AUTHORITIES ON MATERIA MEDICA AND THERAPEUTICS.

STILLÉ and MAISCH.—National Dispensary (1879,) p. 101.*

*In this paragraph occur several serious misprints. The dose of $\frac{1}{200}$ grain is rendered as gm. 0.025, which is really $\frac{1}{12}$ grain, and might prove fetal. In speaking of external applications, 2 and 5 grains are rendered as gm. 0.133 and 0.333, which are correct figures; but immediately after it we find one grain rendered as gm. 0.666, in reality nearly eleven grains.

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"Primary dose $\frac{1}{300}$ grain two or three times a day. It is recommended in doses of $\frac{1}{120}$ grain."

WOOD, Therapeutics (1880), p. 180, makes the truly astonishing statement that: "The alkaloid is officinal, but, on account of its intense activity, should not be given internally."

This was printed more than a year after the publication of the New York Therapeutical Society's report on aconitia in the *New York Medical Journal* for 1878.

BARTHOLOW, Materia Medica (1880), p. 44, simply quotes the New York Therapeutical Society's formula. No personal statement as to doses.

RICE.—Posological Tables (1879), p. 5: "Aconitia; aconitine. Alkaloid from aconite. The commercial product is an impure mixture of alkaloids. The dose is $\frac{1}{100}$ to $\frac{1}{130}$ grain, increased with caution. Chiefly externally."

NOTHNAGEL and ROSSBACH.—Arzneimittellehre (1878) p. 721. "Aconitia is little employed internally. Dose, gm. 0.004. ($\frac{1}{16}$ grain,) and the daily quantity gm. 0.03 ($\frac{1}{2}$ grain)."

This cannot refer to Duquesnel's aconitia. It might be a safe guide for giving Merck's aconitia, which is very impure and of doubtful efficacy.

GUBLER.—Leçons de Thérapeutique (1877), pp. 147-8. Prof. Gubler may be considered as the introducer of Duquesnel's aconitia. In articles, besides in this book he was the first to indicate its wonderful efficacy in neuralgia, particularly trigeminal neuralgia.

He recommends gm. 0.0005 ($\frac{1}{130}$ grain), or less at first; gradually increased to gm. 0.002—0.004—0.005 ($\frac{1}{30}$, $\frac{1}{16}$, $\frac{1}{12}$ grain.)

DOSES RECOMMENDED BY CLINICIANS.

As Duquesnel's aconitia has been known so few years, and has been in use less than four years in this country, it is not surprising that our principal text-books do not speak of it. Still one is surprised to find that Prof. Flint, in the last edition of his "Practice," dated 1881, does not refer to aconitia among the remedies which may cure neuralgia.

HAMMOND, Diseases of the Nervous System (1881), pp. 857-8, speaking of the treatment of neuralgia, recommends Duquesnel's aconitia in doses of $\frac{1}{130}$ grain, gradually increased to $\frac{1}{48}$ grain if necessary, till relief be obtained, or till the characteristic peripheral numbness occurs.

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PERSONAL EXPERIENCE.

Influenced by Prof. Gubler's article and by his book, I began using the aconitia of Duquesnel in the winter of 1877–8, with most gratifying results. More of the drug was imported, and in a few months several of my friends were trying the remedy —among them I may name Dr. McBride and Dr. Andrew H. Smith.

At a meeting of the Therapeutical Society of New York held October 11, 1878, I presented the report of the Committee on Neurotics of that Society upon the use of this aconitia. We reported ten cases cured or relieved. This report will be found in the *New York Medical Journal* for December, 1878.

Since that time aconitia has been used by many physicians in numerous cases of trigeminal neuralgia, with very favorable results. A large proportion of cases have been cured, and some very ancient cases (8 to 12 years) relieved very much by the medicine. A few cases only have been uninfluenced.

In the last two years the alkaloid has been offered in pillular form by several reliable drug firms, and I can testify to the potency and reliability of Caswell & Hazard's tablets, and of Schieffelin's pills. These firms furnish doses of $\frac{1}{100}$ grain and of $\frac{1}{100}$ grain.

In my first use of aconitia I employed a solution made by the late Dr. William Neergaard, the only pharmacist who then (1877–8) held a sample of Duquesnel's preparation.

℞	Aconitiæ (Duquesnel's), gr. $\frac{1}{100}$			.006
	Glycerinæ			
	Alcholis,	āā	ʒi	4
	Aquæ menth., pip., ad		℥ij	60

Each teaspoonful (estimating seven teaspoonfuls to the ounce) contained about $\frac{1}{140}$ grain (gm. 0.00046). This dose was to be given two, three, or more times a day, on an empty stomach, till the pain ceased or the physiological symptom—numbness—was produced. As my subject to-day is not clinical therapeutics as much as posology, I pass by many interesting facts about the use of aconitia and omit all cases.

The remark which I have already made about the necessity of giving small doses of potent drugs to a patient whom we see for the first time, and of estimating his susceptibility applies with especial force to aconitia. Bearing this in mind and carrying it into practice, we may be very bold, almost rash, later on, without running real danger.

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Those of us who introduced aconitia in 1878 soon discovered that some persons, females especially, were powerfully affected by minute doses. Dr. A. H. Smith reported a case to our Committee in which a lady was distressed by $\frac{1}{400}$ grain, and I myself, while in a reduced state of health and suffering severe trigeminal pain, was much benumbed by $\frac{1}{250}$ grain, (though long afterward, when quite well, it required two doses of $\frac{1}{100}$ grain to produce nearly similar effects).

It is well, consequently, to give debilitated, susceptible, and female patients, doses of $\frac{1}{250}$ or $\frac{1}{300}$ grain (gm. 0.00026 to gm. 0.00032) to begin with. These facts have induced the Messrs. Schieffelin & Co. to cease making pills of $\frac{1}{100}$ grain, and to furnish only the $\frac{1}{250}$ grain which can be repeated at will. Messrs. Caswell & Hazard still furnish both doses in the shape of soluble tablets.

In a case of neuralgia, after a day's testing with minute doses if I find no undue susceptibility to the drug I give it freely—$\frac{1}{100}$ grain (gm. 0.00065) every 3 or 4 hours until distinct numbness and coldness (subjective coldness) be felt in the limbs and face. Then a longer interval may be allowed before giving another dose. Some subjects will take 3 or 4 tablets of $\frac{1}{100}$ grain, each day, and be in a constant state of numbness without harm, and often with curative effect.

In some of my cases of chronic epileptiform neuralgia I have kept patients under the influence of the drug for days and weeks,—and have seen no evidence of cumulative effects.

As a rule, in testing a man of average physical development and not reduced by disease I at once start with doses of $\frac{1}{100}$ grain (gm. 0.00065).

As regards maximal doses, I may state that in certain cases of posterior spinal sclerosis with severe fulgurating pains I have given from 4 to 8 doses of $\frac{1}{100}$ grain each in 24 hours, producing in some cases faintness, sickness, and a considerable prostration. I might add that this form of nerve pain has never been relieved by aconitia, and that with hardly an exception, all the tabetic patients I have experimented on have not shown any trace of the numbness which is *the* sign of aconitia effect in healthy persons.

As a rule, the pain of trigeminal neuralgia ceases when the physiological effects of the drug are manifest. I do not pretend, and Prof. Gubler did not claim that aconitia is a cer-

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tain or specific remedy against trigeminal neuralgia, but it certainly is the best of all our present therapeutic resources against this terrible disease. Of course in certain cases, special etiological factors must be considered, and other treatment given besides the aconitia: for example, in clearly malarial neuralgia, and in syphilitic neuralgia, or in the (rare) neuralgia from bad teeth.

IV.—PHOSPHORUS AND PHOSPHIDE OF ZINC.*

(*Phosphorus.—U. S. P.*)

DOSES GIVEN BY AUTHORITIES ON MATERIA MEDICA AND THERAPEUTICS.

STILLÉ and MAISCH. National Dispensatory (1879), p. 1072. These authors, apparently wholly relying upon Gubler and Thompson, state that the dose varies from $\frac{1}{30}$ to $\frac{1}{4}$ grain. They say: "Those who have most advocated its use recommend that a first dose of one eighteenth of a grain (gm. 0.003) should be repeated every four hours till six doses are taken. If then no improvement (in neuralgia) have occurred, the dose should be increased to one-twelfth of a grain (gm. 0.005), and repeated in the same manner as before."

They do not, however, mention Thompson's alcoholic solution of phosphorus.

Zinc phosphide (p. 1546) in "doses of $\frac{1}{16}$ to $\frac{1}{8}$ grain, and even $\frac{1}{3}$ grain."

STILLÉ.—Therapeutics (1874), vol. i, p. 800. "Moderate doses of $\frac{1}{40}$ to $\frac{1}{4}$ grain."

WOOD, Therapeutics (1880) p. 113 recommends a mixture containing oleum phosphoratum, each dose to contain from $\frac{1}{30}$ to $\frac{1}{15}$ grain; or of a chloroformic solution in a mixture, $\frac{1}{16}$ grain.

The dose of zinc phosphide he gives as $\frac{1}{100}$ to $\frac{1}{30}$ grain, which is in striking contradiction to his full doses of phosphorus.

BARTHOLOW.—Materia Medica (1880), p. 96. "Dose of oleum phosphoratum, U. S. P., 5 to 10 drops (equal to $\frac{1}{15}$ or $\frac{1}{15}$ grain, as each ♏ of Ol. = gr. $\frac{1}{150}$ of P.).

Quotes Radcliffe's formula for pil. phosphori, $\frac{3}{100}$ grain in each pill. Also quotes Thompson's tinctura phosphori in doses equivalent to $\frac{1}{40}$ to $\frac{1}{30}$ grain.

* The equivalent of zinc phosphide (Zn_3P_2) is 195.6+62—257.6. Consequently one part of the phosphide contaiints 25 per ct. (about) of phosphorus.

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"The dose of phosphide of zinc is $\frac{1}{12}$ to $\frac{1}{4}$ grain."

RICE.—Posological Tables (1879). Oleum phosphoratum (p. 54). No dose given. [Recommends Dr. Squibb's solution: Phosphorus, 1 part; cod-liver oil, 99 parts.]

"Phosphorus, $\frac{1}{100}$ to $\frac{1}{20}$ grain, increased with caution."

NOTHNAGEL and ROSSBACH.—Arzneimittellehre (1878), p. 200. "Dose from $\frac{1}{60}$ to $\frac{1}{12}$ grain (gm. 0.001—0.005)."

GUBLER.—Leçons de Thérapeutique (1877), pp. 236-7. "Dose, gm. 0.001 ($\frac{1}{60}$ grain) in granules; from 2 to 10 a day."

Praises the oleum phosphoratum in capsules.

"Zinc phosphide, from $\frac{1}{4}$ to 1 grain (gm. 0.01—0.06) per diem"; he rather depreciates its virtues.

DOSES AS GIVEN BY AUTHORITIES ON CLINICAL MEDICINE.

HAMMOND.—Diseases of the Nervous System (1881), p. 69. Speaking of cerebral congestion, he says that the oleum phosphoratum may be given in a mixture in doses of 5 drops (or about $\frac{1}{25}$ grain of phosphorus.)

Zinc phosphide, whose formula he gives as Zn_3P, and estimates as containing $\frac{1}{4}$ of phosphorus, he recommends in $\frac{1}{10}$ grain dose, in pill form (this gives $\frac{1}{40}$ grain of phosphorus); or the phosphoretted resin may be used to make pills, each containing $\frac{1}{60}$ grain of phosphorus.

FLINT, Practice of Medicine (1881), p. 797, merely names phosphorus as a remedy for neuralgia; gives no doses or estimate of its value.

ANSTIE, On neuralgia (1871), p. 180, state that he has used the phosphoretted oil and pills of phosphorus (Dr. Radcliffe's), containing $\frac{1}{30}$ grain three times a day. He does not estimate it as specially useful. (This was written before the publication of Thompson's work.)

J. ASHBURTON THOMPSON.—Free Phosphorus in Medicine, London, (1874), p. 190: "The chief precaution to be observed in the treatment of neuralgia with free phosphorus * * * is to administer a full dose of the remedy in the first place." " * * * unless half a grain or more be given in the course of each twenty-fours, frequent failures, or only partial successes in treatment will be met with." But the remedy must be given in not less than this dose, *i. e.*, one-twelfth of a grain repeated every four hours, from the beginning of treatment."

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On page 191, he admits the utility of the alcoholic and etherial solution, reduced phosphorus, and even zinc phosphide, but he has had the best results from one-twelfth of a grain of phosphorus dissolved in cod-liver oil every four hours.

Thompson has more recently furnished the following formula for the preparation of a solution of phosphorus, which is not unpalatable to most patients:

Take of

Phosphorus,	gr. i		06
Absolute alcohol,	ʒ v	20	

Dissolve with heat.

Glycerine,	ʒ xii	48	
Alcohol,	ʒ ii	8	
Essence of peppermint,	℈ ii	2	5

Mix the two solutions, which make nearly ʒ xx; ʒ i=$\frac{1}{10}$ grain (gm. 0.008.)

PERSONAL EXPERIENCE.

Very soon after the appearance of Dr. Thompson's article, I caused this solution of phosphorus to be made by Mr. F. Haas, by Caswell, Hazard & Co., and by the late Dr. Neergaard, and used it a great deal. A weaker preparation or imitation, under the name of elixir of phosphorus, one teaspoonful of which contains $\frac{1}{20}$ grain, is also sold, but I prefer the stronger form, and write for *solutio phosphori* (Thompson.)

I have employed this solution with the greatest success in trigeminal neuralgia, and with some success in other neuralgias—following Thompson's plan of giving full doses, usually 1 teaspoonful (about $\frac{1}{15}$ grain, if we estimate a teaspoonful to be a little over ʒ i),. every three or four hours. I have known a severe facial neuralgia (not chronic epileptiform neuralgia) cured in two days, and even in 24 hours; several cases in a week.

In conditions of nervous prostration, cerebral anæmia, incipient cortical degeneration (dementia), in melancholia, I have been much pleased with a combination of Thompson's solution and cod-liver oil in the proportions of 1:6 or 1:4, a tablespoonful of the mixture being given after each meal.

In other cases I have had an extemporaneous mixture made and given two or three times a day: Thompson's solution, 1 teaspoonful; sherry, two tablespoonfuls; cod liver oil, from

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1 to 2 tablespoonfuls; and the yolk of one egg, thoroughly beaten and mixed, with the addition of a little extra oil of peppermint. This is well received by most patients, and constitutes a most valuable tonic.

The phosphide of zinc in doses of $\frac{1}{8}$ to $\frac{1}{4}$ grain (gm.0.011 to 0.016) combined with nux vomica or with belladonna, according to indications, has seemed of some efficacy in the treatment of posterior spinal sclerosis, of cerebral anæmia, of nervous prostration ("neurasthenia"), and of incipient dementia.

With pills of pure phosphorus I have had little experience. The pills offered by most of our manufacturing drug concerns are of too small a dosage. As may be seen from the citations made, and from my own experience with other preparations, the giving of $\frac{1}{100}$ grain (gm. 0.0006), or even of $\frac{1}{50}$ grain (gm. 0.0012) of phosphorus is of probably very little use. From $\frac{1}{30}$ to $\frac{1}{10}$ grain (gm 0.002—0.006) should be administered three times a day, with, of course, due watchfulness for signs of gastric irritation.

V.—CRYSTALLIZED NITRATE OF SILVER.

(*Argenti nitras, U. S. P.*)

DOSES AS GIVEN BY AUTHORITIES ON MATERIA MEDICA AND THERAPEUTICS.

STILLÉ and MAISCH.—National Dispensatory (1879), p. 237. "Dose from $\frac{1}{8}$ to $\frac{1}{4}$ grain three times a day. Doses of $\frac{1}{8}$ grain occasion no special symptoms, but larger quantities are apt to cause gastric heat, pain and nausea.

STILLÉ, Therapeutics (1974), i, p. 367, *et seq.*, quoting authors upon diseases of the nervous system, refers to doses varying from $\frac{1}{8}$ to $\frac{1}{4}$ grain, three times a day.

WOOD.—Therapeutics (1880), pp. 51-3. "Dose from $\frac{1}{4}$ to 1 grain, in pill form, given upon an empty stomach, when it is desired to affect the stomach, and after meals, when the constitutional effects of the drug are desired."

"When given for a chronic disease, its administration should be suspended for one week, at the end of every third week, and its employment should not extend over a longer time than three months, without a protracted intermission."

BARTHOLOW, Therapeutics (1880), pp. 213-5, gives elaborate directions and formulas for its use in various visceral affec-

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tions, dyspepsias, gastritis, colitis, etc, but hardly refers to its use in nervous diseases, and does not recommend it.

RICE.—Posological Tables (1879). "Dose ½ to 2 grains: increased with caution."

NOTHNAGEL and ROSSBACH. — Arzneimittellehre (1878,) p. 113. "In pill form, gm. 0.005—0.03 (1/12 to ½ grain)."

GUBLER, Leçons de Thérapeutique (1877), p. 579, thinks that no good effects are to be expected from its internal use, and gives no doses.

DOSES AS GIVEN BY AUTHORITIES ON CLINICAL MEDICINE.

The older English physicians, Sims, Wilson, Harrison, and Roget, quoted by STILLÉ, Therapeutics, i, p. 367, gave doses of one, two, three and even six grains, three times a day for epilepsy. It is not now employed for this disease, I believe.

FLINT, Practice of Medicine (1881), p. 476, treating of locomotor ataxia, recommends giving from ⅛ to ¼ grain, three times a day, for several weeks; then suspending its use for a while.

HAMMOND, Diseases of the Nervous System (1881), p. 633 in the treatment of locomotor ataxia, merely mentions doses of ¼ grain three times a day; gives no details, and does not seem to attach any value to the drug.

WUNDERLICH, Archiv der Heilkunde, 1861, ii, p. 193 (cited by STILLÉ, p. 368), gave ⅛ grain twice and thrice a day; quoted by TOPINARD, he gave ⅛ grain three or four times a day: for locomotor ataxia.

BOUCHUT (cited by STILLÉ, pp. 368-9), Bull. de Thérap., lxiv, p. 57, gave to a child 5 years old, with paraplegia, 1/10 grain twice a day. To adults for paralysis from ⅛ to 1 grain a day.

TOPINARD, De l'ataxie locomotrice, Paris, 1864, pp. 435-468, gives a full account of the attempts to cure sclerosis of the posterior columns by silver; relates several cases of his own, and concludes that the drug is usually useless in locomotor ataxia; he gave from ⅛ to 1½ grains *per diem*.

He cites the following doses as prescribed by several well-known physicians:

"CHARCOT and VULPIAN in 1862 gave doses of ⅙, ⅓, ½ grain three times a day. Later CHARCOT has given as high as 1½ grains in a day.

PIDOUX, 1⅓ grain *per diem*.

GUBLER and BEAU, 1½ gr. *per diem*.

HILLAIRET, 2½ gr. *per diem*."

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W. ERB, Ziemssen's Cyclopædia, Am. ed., vol. xiii, On Diseases of the Spinal Cord, pp. 614–5, recommends from $\frac{1}{4}$ to $\frac{1}{3}$ grain three times a day, or from 1 to $1\frac{1}{2}$ grains *per diem*, until 120 or 150 grains have been consumed. He has a high opinion of the medicine, for he says, p. 614: "Among the *internal remedies* for tabes, nitrate of silver undoubtedly stands first, as it can show quite undoubted results."

PERSONAL EXPERIENCE.

I have employed nitrate of silver extensively in the treatment of locomotor ataxia, and am almost disposed to agree with Erb. I can most positively assert that in quite a number of my cases the course of the disease has been materially checked, and in many others repeated periods of relief have been secured by nitrate of silver.

I have also given it in various forms of subacute and chronic myelitis, but with less definite results; though my impression of its action in these cases is favorable.

I never prescribe less than $\frac{1}{4}$ grain (gm. 0.0126) of nitrate of silver at a dose, and usually give $\frac{1}{3}$ grain (gm. 0.03). The remedy is made up in a pill with an indifferent extract (taraxacum), or with extract of nux vomica, or with extract of belladonna, according to the indications of the case, whether for spinal stimulation or for sedation.

I always give the pill before meals, three times a day, and occasionally administer a fourth pill at bedtime. A course of silver, with me, usually lasts two months, which at the rate of $1\frac{1}{3}$ grains (gm. 0.10) a day, would give 90 grains (gm. 6.)—a perfectly safe quantity as regards danger of discoloration of the skin. After an interval of two or three months I often give another, shorter course, and so on.

None of my patients has as yet shown discoloration (argyria), and I have seldom been annoyed by the occurrence of gastric and intestinal irritation. Albuminuria I have never seen.

Discussion.

Dr. V. P. GIBNEY, of New York: Mr. President—In those forms of contractions due to irritation of the spinal meningitis, blisters are often efficacious, as may be seen by the following case:—A boy from Texas came under my observation, in whom contraction had gone to the extent of drawing his lower extremities into the tailor's position. The disease was of four months' standing. A single blister $6\frac{1}{4}$ cm. by 15 cm. ($2\frac{1}{2}$ in. by 6 in.), applied over the diseased spine, resulted in

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bringing his legs to the floor within ten days. Another blister was applied and a complete cure was effected. The second blister was applied a little more than a week after the first, and it entirely removed the little tenderness which still existed. The patient remained under observation for three months, and there was no return of the disease, and the gait became perfect.

Dr. WALTER B. CHASE, of Brooklyn: Mr. President—In a case of supra-orbital neuralgia occurring in a woman 80 years of age, I gave at first gm. 0.00043 ($\frac{1}{150}$ of a grain) of aconitia three times a day, and gradually increased the dose to gm. 0.00086 ($\frac{1}{75}$ of a grain), thus making the maximum quantity gm. 0.0026 ($\frac{1}{25}$ of a grain) daily. After about six or seven days the physiological effects of the drug were produced, and sudden prostration developed, but this soon passed away. The effect produced in this case leads me to inquire whether Dr. Seguin has noticed the marked toxical effects of the drug in any of his cases.

Dr. SEGUIN: I have given as high as from gm. 0.005 to gm. 0.01 ($\frac{1}{12}$ to $\frac{1}{6}$ grain) in twenty-four hours; and in many cases I have given four doses daily of $\frac{1}{100}$ of a grain each, and I have not known of unpleasant results being produced except severe prostration. I know of one case (not in my practice) in which the patient was apparently dead, being unconscious, thoroughly prostrate and collapse having set in, but, by the use of hypodermic injections of ammonia and brandy, recovered.

Dr. H. E. ALLISON, of Willard, Seneca Co.: Mr. President—I wish to call attention to the beneficial effects of gelsemium in facial neuralgia, given in 5-drop doses until it produces its sedative effect. As a general thing the neuralgia is cured in about an hour. I have also found hydrate of chloral and camphor gum, triturated together, a very valuable external application. Both of these remedies have, in my hands, proved themselves very efficient, and they are safer than aconitia.

Dr. E. V. STODDARD, of Rochester: Mr. President—I think that the failure to obtain effectual dosage is due to two causes, with both of which Dr. Squibb is very familiar, and I would be pleased to hear him speak upon this subject. In the first place, of the almost innumerable preparations furnished, the strength is exceedingly variable, no two houses furnishing articles of equal strength; and in the second place, a fault exists where Dr. Seguin had placed it—namely: in the text books on Materia Medica. The tendency was to follow the old rules.

Dr. E. R. SQUIBB: Mr. President—There is somewhat of a proprietary flavor in the expression "Squibb's fluid extract," employed by Dr. Seguin, which I do not like, as the preparation is simply the fluid extract of conium, made according to the U. S. Pharmacopœia of 1880, to which the profession is quite as much indebted for the quality of the preparation as to myself. Of course it is well to have good material with which to work, and the preparation should be made in the proper way. The Secretary, Dr. Smith, has collected most of the conium which I have used, and it has been cured in the most careful and efficient manner. With regard to the use of medicaments whose physiological effects are so different, in different persons, such as conium, gelsemium, and aconite, it is safe to say that the doses, to begin with, should be the minimum ones, for one individual is not a good criterion for any other. These remedies partake of the character of those which act primarily through the nervous system, viz.: that almost every person has a physiological quantity which produces a definite result, and short of that the proper effect is not obtained As an illustration I have known cases in which gm. 0.13 (2 grains) of the sulphate of quinine produced physiological effects, and I have also known of instances where gm. 1.3 (20 grains) failed to produce physiological effects. I have also noticed very great discrepancies with regard to the effects produced by gelsemium, and the

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difference between the extremes was remarkable. So with aconite and its preparations. Aconitia is an exception to the general rule, since, in order to get a dosage which can be entirely relied upon, we must know the alkaloid used. Different varieties of aconite yield different kinds of aconitia, and some of them are very much more potent than others. This is the reason why Dr. Seguin tells us that Duquesnel's aconitia is the one he uses. This aconitia pretty surely does not come from the officinal aconite—the root of aconitum napellus, but is supposed to come from the aconitum ferox, a very much stronger variety, the difference being in kind rather than in quality. Hence we see that there are different kinds of aconitia, as well as different qualities of the same kind, and this confuses the dosage very much indeed, so that it is doubtful whether a well-made fluid extract from the officinal root of good quality be not the best form in which to use this important drug, beginning with very moderate doses, and increasing until the physiological effect is obtained for each individual case.

DR. SEGUIN said that he was simply transferring the term he usually employed in prescribing conium, and certainly did not wish to carry the idea that the preparation was in any way proprietary. When interrupted by the Business Committee he was about to refer to the essay written by Dr. Squibb, in 1867, in which he describes the process of gathering and saving the conium, as done by Dr. Manlius Smith. As regards doses of conium, those which he had used were very large when compared with those laid down in the books. To adults he never gives less than 20 drops, and frequently 60 to 100 at a single dose, and this for the purpose of obtaining the paralyzing effects of the drug, especially for the specific neuroses such as chorea. He had used conium in full doses, 20 or 30 minims as a hypnotic, or an indirect narcotic, reducing the excitability of the motor system.

DR. SQUIBB: Mr. President, with regard to administering conium in large doses, if the fluid-extract is diluted at all, it is very important to see that there is no deposit caused by the dilution. I have known serious results to occur from diluting the fluid-extract in a manner which precipitated the active principle, and thus too much was given in the last doses and they became dangerous. Some very dangerous conditions have apparently been produced in this manner. The fluid extract should be dispensed undiluted, especially if large doses are used.

VIII.—A NEW GALVANIC BATTERY.

BY L. E. FELTON, M. D., POTSDAM, N. Y.

Mr. President and Gentlemen: At the last meeting of this Society I presented a galvanic cell for an induction coil, which was perfectly portable. A number of gentlemen expressed an interest in the cell and desired to know if it could be adapted to a galvanic battery. To-day I have the pleasure of presenting a model galvanic battery, made up of eighteen such cells.

Before describing it, I will first call your attention to the defects in the ordinary zinc-carbon battery that you may the more readily see how I overcome them.

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It is impossible to prevent the fluid from spilling or leaking with a removable cover if the battery is carried about.

The soft rubber packing soon becomes ruined from the contact with the fluid.

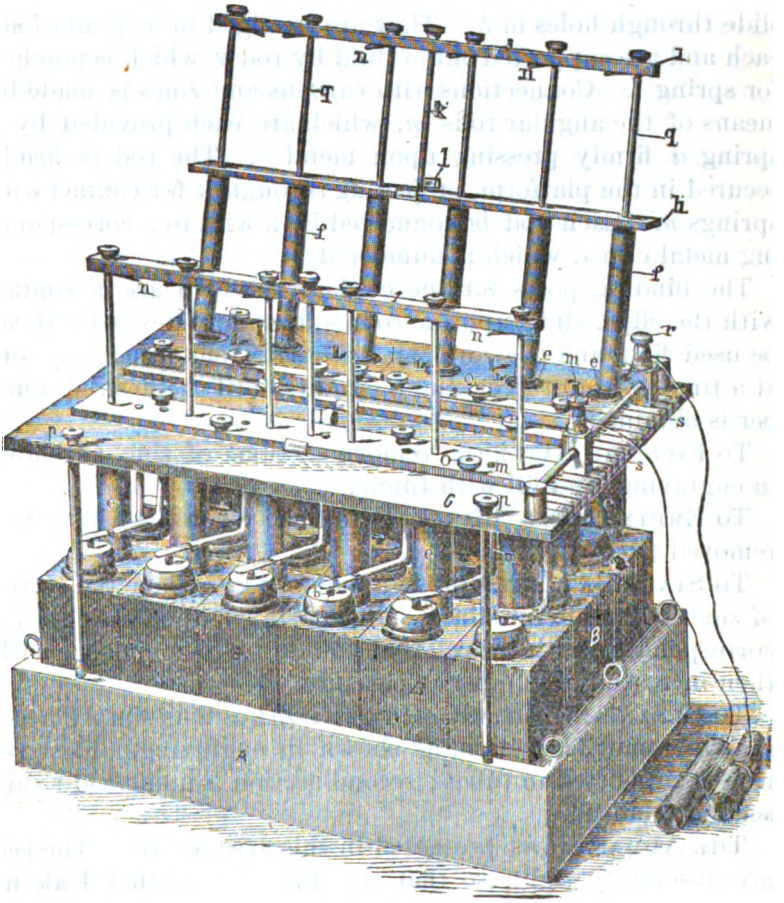
The carbons are very friable and constantly breaking.

It is difficult to clean and amalgamate the zincs.

The elements being secured by screws to a piece of metal which enters the cell, the connections soon become corroded.

By referring to the engraving, the mechanical construction of my battery will be readily comprehended.

Galvanic Battery.



[CASE REMOVED IN ENGRAVING.]

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The cells *B* are of hard rubber, closed on all sides by vulcanizing. The negative element is a rod of carbon ¾ inch (19 mm.) in diameter, having a piece of metal *b* soldered into one end for connection. This end is filled with paraffine and fitted to a hard rubber ferule *c* which is secured by cement and screwed into top of the cell. By this means connection with carbon is made outside the cell, into which the zinc elements are drawn when the battery is not in use and through which the cells are filled and emptied. The ends of tubes pass into holes in a platform of hard rubber *C*, shown in section 3 of engraving. These holes are covered by strips of rubber *h*.

The positive elements are rods of rolled zinc *f* supported by metal rods *q*, which are fixed in a bar of hard rubber *i* and slide through holes in *h*. They are arranged in sections of six each and are supported out of fluid by rod *k*, which is notched for spring *l*. Connections with carbons and zincs is made by means of the angular rods *m*, which are each provided by a spring *a* firmly pressing upon metal *b*. The rod is firmly secured in the platform, projecting through it for contact with springs *n*. Each rod is connected by a wire to a corresponding metal clip *s*, which is numbered.

The binding posts for the cords, *r r*, which are in contact with the clips, slide upon a rod, so that any desired cell can be used first and the number increased from either way, one at a time, without breaking a circuit, until the desired number is obtained.

To FILL THE BATTERY—remove sections of zinc, as shown in engraving, and fill with funnel.

To EMPTY CELLS—lift off platform *C*, when the cells can be removed from tray *A*.

To START BATTERY—press upon spring *l*, when the section of zincs will slide into fluid; slide posts *r r* upon the clips *s s*, corresponding with the cell that you desire to commence with; then increase the number at pleasure.

To CLEAN AND AMALGAMATE THE ZINCS it is simply necessary to remove a section, as shown in engraving. First section is supported in tubes; second section is immersed; third section removed.

THE ADVANTAGES presented in this battery are: The cells are absolutely tight, so that the fluid can neither leak nor spill, making it perfectly portable. The connections are made

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outside the cell, so that they do not corrode from contact with fluid. The carbons can not be broken. The zincs can be cleaned and amalgamated in a few minutes. Any section of zincs can be used at a time. Any particular cell can be brought into the circuit at a time. It is but a moment's work to start it. It is perfectly clean. It is particularly adapted for electrolysis.

IX.—THE TREATMENT OF SCARLATINA.

By DANIEL LEWIS, M. D., of New York.

In the "Medical Record" of Feb. 3d, 1877, may be found a brief report of thirteen cases of scarlatina, treated by infusion of digitalis, in which I offered my reasons for recommending its general use.

The present paper is based upon the histories of 150 cases which succeeded the thirteen previously reported, and they, being the product of two pretty severe epidemics which have visited this city during the past three years, are believed to be sufficient ground for reliable deductions.

My attention was first called to this use of digitalis by Prof. Bartholow's clinical lecture on "Physiological Antagonism as applied to the Treatment of the Febrile State,"* and his theory was based upon the physiological action of the drug, concerning which nearly all writers are now agreed, viz:

1. Digitalis causes contraction of the arterioles and consequent diminished blood supply. Exudation is thereby checked or prevented.

2. The pulse is reduced in frequency and the arterial blood pressure raised.

3. Doses sufficiently large to slow the action of the heart will reduce temperature.

In the rapid pulse and high temperature of scarlatina, the low arterial tension and embarrassed secretion by the kidneys, are to be found all the indications for the use of this remedy, and Prof. Bartholow declares "that in a considerable experience in the treatment of scarlet fever, digitalis has been uniformly successful."

* American Clinical Lectures, Vol. II. No. I.

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For present purposes we may divide scarlatina into two classes:

1. Malignant scarlet fever, in which the attack is so sudden and overwhelming that the patient dies before the effect of any drug can be obtained.

2. All cases usually classed as scarlatina anginosa, in which the chief danger are the pyrexia and consequent tissue degeneration, and the catarrhal or parenchymatous nephritis, by which elimination by the kidneys is diminished or arrested.

Digitalis meets both these indications by lessening the blood supply to tissues, by increasing the amount of water in the urine, and by its direct action on the Malpighian tufts.

While most writers admit the effect of the drug on the circulation of the kidneys, there is abundant evidence that the tendency to exudation, in *all glandular tissue* is reduced to the minimum by its use.

The most reliable preparation for these cases, is the infusion of the best English leaves. Dr. Bartholow says a reliable tincture may be used, but in cases where I have employed it, the results were not satisfactory. It does not appear to be as readily eliminated as the infusion, and unpleasant effects will often follow, and its administration be interfered with, while we may give the infusion for weeks without depressing the circuculation beyond the desired limits. I would suggest, also, that in ordering the infusion, you send to a reliable pharmacist, unless you are willing to receive, as a substitute, a diluted fluid extract or some equally uncertain preparation.

We should commence the administration of this remedy at the earliest possible stage of the disease, before those tissue changes occur which it is intended to prevent as well as cure.

To a child five years old, a teaspoonful every four hours is a safe, and usually efficient dose. Should the pulse and temperature be unaffected by it, more can be given, but its effects carefully noted, and the dose reduced whenever the desired effects are produced. I continue to give it two or three times a day, until the end of the third week, unless the pulse becomes less frequent than it should be.

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The following table contains pulse and temperature (axillary) of a few cases treated on this plan:

AGE.		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.	10th.
2½	T.	103¾	103	100½	101½	101½	100		99		
years.	P.	130	120	110	120						
5	T.	102	102½	102½	100½			100½			
years.	P.	140	136	136	120			70			
9	T.	103¼	105¼	104	101½	101					
years.	P.	130	140	130	110	110					
4	T.	105	101½	101½	100¾	100	99¾				
years.	P.		not recorded.								
3	T.	105	101½	101½	101½	100¾	100		99¾		
years.	P.		not recorded.								
9	T.	103¼	105¼	104	101½	101		100¼			
years.	P.	130	140	130	110	110		90			
6	T.	103¾	104¾	106	105⅛	104¼	104½	Death			
years.	P.	152	not recorded.								
1 year	T.		104⅞		101½		100⅛		100¼		
9 mo.	P.		140		120		130				
5	T.	105	102	102½	103¾	100½		100½	100½		99¾
years.	P.	160	140	136	140	120		124	70		66

It will be observed from this table that in nearly all cases, a decided fall in pulse and temperature occurred within twenty-four hours after the digitalis treatment was commenced.

The *first day* in the tables refers to the beginning of treatment, some of the patients having been sick one day before I was called to attend them. Such was the fact with the fatal case recorded, which was of a very malignant type from the outset of the disease.

On the fourth day, in the last history, it will be noticed there was a decided increase in pulse and temperature, and, although the patient was only five years old, a desert spoonful of the infusion was given every four hours till the following morning, and with the most gratifying result.

In all cases, the following prescription has been ordered for the throat:

℞ Potass. Chlorat. 4|0
Tr. Ferri Chloridi 8|0
Glycerinæ 30|0
Aquæ q. s. ad 250|0

Misce—Sig. A teaspoonful every half hour.

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If exudation occur in the fauces, the same mixture is also to be used with Davidson's Atomizer, No. 55, every twenty minutes. A warm sponge bath should be given more or less frequently, according to the degree of fever, and inunctions of olive oil over the entire body at least twice daily.

The oiling should be continued until desquamation is completed.

A milk diet should be strictly enforced, especially on account of its diuretic effect.

The results of this plan, in my 150 cases, have been quite satisfactory. Seventeen proved fatal, only two of whom died of nephritis.

The mortality from scarlatina in New York city during the past year was nearly twenty-three per cent., while in my cases you will notice, it was less than 11 per cent.

There were only two cases of otitis, both of which were mild, and made a good recovery. In the entire number there was no case of suppuration of cervical or other glands.

Dr. F. A. Thomas, of New York, informs me that he has employed the same treatment in 50 cases with excellent results.

In the epidemic of the present season I am pursuing the same plan, and have not the slightest hesitation in recommending it to the profession.

X.—FRACTURE OF THE CLAVICLE, TREATED WITH THE "BACK SLING."

BY LORENZO HALE, M. D., ALBANY.

Mr. President and Gentlemen:—It is with a degree of hesitation that I bring before this society the subject of fracture of the clavicle, fearing lest I shall be misunderstood as not appreciating the venerable and brilliant Dr. Moore, of Rochester, whom I regard as the man to whom the respect and the thanks of the whole profession are due for originating and unfolding the only true principle of treatment for fracture of the clavicle.

I assume to myself to have so modified the application of that principle as to increase the comfort of the patient and the efficiency of the method of extension employed.

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E. M. Moore, M. D., of Rochester, has well shown ("Transactions of the Medical Society of the State of New York, 1870," p. 107 *et seq.*), the faults of the treatment with the axillary pad. While the theory of treatment as developed by him is demonstrably correct, yet his bandage—"a shawl," "eight inches in breadth" "when folded"—appears to be somewhat cumbersome and warm; and, in passing over and in front of the injured shoulder, lies over the depressed fragment, and hides the fractured bone away from inspection; and, when

(FIG. 1.)

firm extension is attempted, pressure appears to come on the already depressed fragment.

These undesirable conditions are obviated by the use of a sling, applied by holding one end of a narrow roller bandage against the scapula of the sound side, and then passing the bandage under the forearm of the injured side near the elbow (the elbow being first bent and drawn back), thence up, around and over the same forearm and across the back to the axilla of the sound side, then in front of and over the sound shoulder to unite with the end held at the place of beginning: (see figure 1). It is not always necessary that the bandage should be thus officinally crossed on the back; but a "back

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sling" forming parallel lines on the back, although slightly cooler, is not quite so secure.

And further,—instead of finding support for the hand by a sling in front, fastened directly over the fractured clavicle,—a narrow strap may pass from the wrist across the chest to the "back sling" on the sound shoulder. The front support is thus entirely away from the weak shoulder, and tends to lessen the strain and chafing of the bandage on the sound shoulder (see figure 2).

(FIG. 2.)

This dressing admits of the application of a compress over the inner fragment, to be held down with adhesive plaster; but, except when the clavicle is broken into more than two fragments, a compress will seldom, if ever, be necessary, since the "back sling," in drawing back the humerus, makes traction upon the clavicular portion of the pectoralis major—opposing the clavicular fibres of the sterno-mastoid which have drawn the inner fragment upward—and thus pulls the inner fragment of the clavicle downward.

The outer fragment is also acted upon by this drawing back of the humerus, for the scapula is pushed upward and inward

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toward the spinal column, and, through the medium of the scapulo-clavicular articulation, the outer fragment of the clavicle is brought upward, and extended outward, and the axes of the two fragments are firmly held in one continuous line.

Hence, the "back sling," in holding back the humerus, is seen to fulfill what have always been specified as the indications in the treatment of fractured clavicle, viz. : to support the shoulder in a direction *upward*, *backward* and *outward*.

Similar anatomical conditions to these above detailed are obtained, although to a less degree, by simply pinioning the forearm of the injured side behind the back ; this posture is more uncomfortable and less effective than the "back sling," but may be necessary in the treatment of fractured clavicle in imprudent or insane patients, where it would not be safe to pemit even the slight freedom of motion allowed by the "back sling."

This "back sling" should be of some material that will not cut nor wrinkle, such as suspender webbing or a wide leather strap ; it is light and cool ; it leaves the site of the fracture *at all times accessible* (see figure 2) ; it safely allows a moderate and comfortable degree of motion in the forearm and hand; it gives the patient an immediate sense of security and relief, and is followed in practice by a result that approximates perfection. As it is to be applied over a portion of the clothing, which serves in a measure the purpose of padding, it is agreeable to the patient.

Aged persons and others whose flesh is soft or œdematous require some form of protecting splint or padding, as a saddle or muff on the forearm, and also padding in front of the sound shoulder, and in some cases daily tightening and slackening of the bandage ; on this account it is convenient to have the ends of the "back sling" fastened with a buckle.

The following cases illustrate the use of the "back sling" in different conditions :

W. S. H., a boy four years and ten months old was treated in September 1875, with a figure 8 bandage and axillary pad for simple fracture near the middle of the right clavicle. The fragments could not be kept in apposition, and the callus became very large. Dr. Moore's dressing was then applied, and found to be a great improvement over the axillary pad, but was not satisfactory for reasons which have been already

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stated. After about two weeks, a suspender and buckle were applied as a "back sling" without any padding; it held the fragments in good position, and was a delight to the patient. This bandage was removed after about two weeks more. After another month it was impossible to detect with certainty the injured bone. This is the original patient for whom this dressing was first devised by the writer.

Mrs. C., aged 66, fell down a stairway and fractured the right clavicle near the middle. The "back sling" was applied soon after the injury. The patient was œdematous from head to foot, and required splint and padding under the suspender band about the forearm and the opposite shoulder; the sling was each morning tightened by means of the buckle at the back, and slackened at night. Crepitus was last observed in the middle of the third week. *No callus* could be felt at any time, except a very slight ring on the tenth day only. The "back sling" was removed after six weeks, and which clavicle had been fractured *could not then be detected.*

Charles L., a boy of eleven years, fell from a moving wagon, when inside a barrel, October 8, 1880. After five days of pain and fomentations, the patient was presented for treatment. The "back sling" was applied, and gave immediate relief. In the second week the callus formed two horns; the one above the clavicle pointed to the shoulder, and the projection below the clavicle grew out towards the sternum; this position simulated malposition of the fragments. The "back sling" was worn until the fourth week. After two months the horns of the callus were wholly absorbed, and the bone appeared to be *as perfect as if never broken.*

Fracture from direct violence near the acromial end of the clavicle is difficult to reduce, on account of the length of the inner fragment tilted upward by the sterno-mastoid. In my own hands, and with other practitioners of Albany, even these difficult cases have been restored to symmetry by the use of this "back sling."

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XI.—ON CROUP OF THE CONJUNCTIVA: WITH REMARKS ON THE TREATMENT OF THE CONTAGIOUS FORMS OF CONJUNCTIVAL INFLAMMATION.

BY DR. H. KNAPP, OF NEW YORK.

Mr. President and Gentlemen: The observation of so-called extreme cases is sometimes required to throw our mind away from the track of familiar views into new channels of thinking. We then recognize the significance of certain manifestations, which we failed to appreciate so long as we noticed them only in low degrees of development. Such an extreme case from the common group of muco-purulent conjunctivitis, came under my care lately, and forced me to change my opinion on that kind of inflammation which several authors have described as croupous or membranous conjunctivitis. The case, briely related, was as follows:

A boy, David Hanifin, 9 years old, was brought to my clinic from the St. Stephen's Home in New York, on October 9, 1881. The nurse stated that, four weeks previously, he had caught the ophthalmia from which many of the children suffered. He had daily grown worse, and since one eye had become blind and the other had been affected soon after the first and in like manner, the Sisters were afraid he might lose both eyes. They begged me to admit him to the hospital.

On examination, I found the lids of both eyes red, lustrous, swollen, soft, not particularly painful to the touch; the palpebral conjunctiva of both eyes was swollen and covered with thick, coherent, white membranes, which were difficult to wipe away with a sponge, leaving an uneven, dark-red, bleeding surface. The cornea of the right eye was absent and the defect filled up by the same kind of membrane, which, however, could not be wiped off. The cornea of the other eye was intact. There was a thin, puriform discharge of moderate quantity. The boys's general health was good. I demonstrated the case to the students as a mild form of ophthalmo-blennorrhœa with well-marked membranous deposits, a typical specimen of what Arlt and some others had called croupous conjunctivitis. Such deposits, I remarked, were not uncommon in acute

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catarrhal and also in milder cases of purulent conjunctivitis, and there was very little danger of corneal ulceration. The destruction of the right cornea in this case was peculiar and probably accidental, the boy stating that a week after the onset of the disease he had fallen with this eye against a stove. Our hospital at that time being filled with operative patients, we had neither the space to admit the little patient, nor could we spare the nurses to attend to him properly. I therefore told his nurse to take him back, apply iced compresses to his eyes day and night, and cleanse the eyes every half hour.

Under this treatment the case remained materially unchanged for ten weeks. The substance replacing the right cornea grew into a mushroom-like tumor, which I removed with scissors. It proved to be a granuloma of the iris, covered with a dense croupous membrane. The boy was brought to the clinic twice or three times a week; the detached membranes were replaced by others in a very short time, almost under our eyes; the next day they always were as thick as on the day previous. Careful tentative touching with a one-per cent. solution of nitrate of silver, or with the sulphate of copper crystal, only aggravated the disease, as I was afraid it would. Resorcin, boracic acid, chlorate of potash, and carbonate of soda, which were brushed into the eye, showed no influence whatever on the morbid process.

Towards Christmas the formations of the membranes appeared diminished and the inflammation on the decline, the left cornea all the time having been perfectly intact. On January 4th, however, after an absence of two weeks, the boy was brought again with the inflammation as intense as ever before, the center of the left cornea with a dense white infiltration of five millimeters (one-fifth of an inch) in diameter, the remainder of the cornea dull, the iris congested, no pupil visible, and sight reduced to perception of light. Atropia did not dilate the pupil. Now I took the poor boy to the hospital, where iced compresses were applied to his lids day and night, the lids carefully cleansed every half hour, atropia instilled several times daily, and the membranes wiped off every day. The retro-tarsal folds were swollen, and had polypoid excrescences, which were cut off. The pain and burning in the eyes were at once relieved, the discharge diminished, and from the third day the periphery of the cornea began to clear up and,

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the infiltration to absorb. The membranes became thinner, were more easily removed; soon they broke to pieces, reproduced themselves only in separate patches, and in three weeks had disappeared altogether. The discharge also lessened in proportion as the membranes diminished. In two weeks the pupil began to dilate, and having then become larger than the steadily contracting infiltrations of the cornea, the boy began to see again. When the formation of the membranes had ceased, the iced compresses were applied only an hour every morning, noon, and evening. The ocular conjunctiva had never shown any deposits. The palpebral conjunctiva, after the disappearance of the membranes, was still swollen, dark red, and uneven, showing the condition which has been, improperly, described as papillary trachoma. Daily touchings with bluestone now had a good effect, and when I left New York, February 6th, the lids were only moderately rough, the cornea had a small superficial opacity in its center, the pupil was moderately dilated by atropia, and the vision about $\frac{20}{100}$. Another granuloma of the iris, this time free from croupous membranes, had formed in the right eye and was cut off; that eye is atrophic, but the other saved, as the disease is virtually over.

Besides this case, I have seen only one other of equal gravity, in a boy of five years. There the disease also started in the right eye, but soon led to so high a degree of swelling of the palpebral conjunctivæ (which by their uneven and creviced surfaces had the appearance of cauliflower excrescences), the muco-purulent discharge was so moderate, the ocular conjunctiva and cornea being unaffected, that I disregarded the importance of the croupous membranes, and considered the disease as a proliferating form of muco-purulent inflammation of the conjunctiva palpebralis. The usual remedies, astringents, a one or two per cent. solution of nitrate of silver, touching with the sulphate of copper crystal, were of no benefit whatever; the membranes, detached one day, were reproduced in equal density the day after. The cauliflower excrescences became very large and had a fungoid appearance. Supposing that they were granulation tissue I destroyed them with the nitrate-of-silver stick as thoroughly as Hebra used to destroy lupus nodules. The next day the eschar was cast off and replaced by the same dense croupous membrane which always

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had been there before. I treated the boy as a dispensary patient with mild astringents and cold applications to be made several hours during the day. After this had gone on for three or four months, during which I had repeatedly cut off polypoid excrescences of the retro-tarsal fold, the boy discontinued attendance for a few weeks, but then came back with his right cornea completely destroyed. I took him to the hospital, treated him like a case of blennorrhœa with uninterrupted cold applications; in a few weeks the formation of the membranes ceased, and the left eye, which had had the same affection, though in a less degree, was saved.

Mild cases of this affection, gentlemen, are not infrequent. They begin under the form of acute catarrh or moderate blennorrhœa, but soon are distinguished by the formation of thin whitish membranes covering the palpebral portions of the conjunctiva. Under the ordinary treatment of astringents, cold applications and careful cleansing, they get well in from three to six weeks. Having seen so frequently that the membranes had no appreciable influence either on the gravity or the course of the disease, I did not consider them as an essential feature of the disease, and classified the cases mostly as acute catarrh; sometimes, when the discharge was more puriform than mucoid, as acute blennorrhœa.

C. S. BULL, in the third American edition of Soelberg-Wells' text-book, devotes fifteen lines to croupous conjunctivitis, in which he says:

"This form has been regarded by some English and Continental authorities as a distinct variety of conjunctivitis, but there seems good reason to doubt this.

* * * * * *

"The treatment consists in stripping off the membrane and cauterizing the surface, as in catarrhal or purulent conjunctivitis."

H. D. NOYES, in his recent treatise on diseases of the eye, (Wood's Standard Medical Library, 1881,) devotes one and one-third page to "*Croupous, or diptheritic conjunctivitis*," (page 168.) Though he describes croup and diphtheria under the same title, he points out the principal distinction between the two forms of exudation, but also regards the croupous membrane as an unessential feature of mucopurulent ophthalmia.

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I have changed my opinion on this subject and concur with *Arlt*,[1] *Stellwag*,[2] *Saemisch*,[3] and *Wecker*,[4] who, especially Saemisch, give clear descriptions of the disease, and state that we have to consider croup as a distinct form of conjunctival inflammation. It differs from catarrh, blennorrhœa, and trachoma by the presence of the characteristic whitish membranes, and from diphtheria by several points which I beg leave specially to mention:

1. In diphtheria the lids are very stiff and hard; it is difficult or impossible to evert them; in croup the lids are supple and soft, and can be easily everted.

2. The diphtheric lid is usually hot and painful to the touch, whereas the croupous lid can be handled without causing much pain.

3. The diphtheritic exudations are continuous from the deposit on the surface through the superficial and deeper layers of the conjunctiva, whereas the croupous exudation is a surface deposit only.

4. The diphtheritic membrane cannot easily be removed, but must be torn off with some force, leaving the subjacent tissue pale and ragged, whereas the croupous membrane can be wiped off as a whole, leaving the subjacent tissue dark-red, bleeding, and uneven—finely nodular.

5. The tissue of the diphtheritic lid when cut into is anæmic and has, in the developed cases, a white, lardaceous appearance, whereas the tissue of the croupous lid is highly congested and soft.

6. The diphtheritic process leads to mortification of the invaded conjunctiva, the croupous process to proliferation and cauliflower or polypoid excrescences.

7. Diphtheria readily extends from the lids to the bulbar conjunctiva and the cornea, whereas croup is long limited to the lids, and only in the severest cases affects the cornea, and seems always to leave the scleral conjunctiva free.

Let me now trace a *short sketch* of the disease under consideration.

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[1] Text-book, 1st edit., 1851, p. 85, and his new text-book, Klinische Darstellung der Krankheiten des Auges, 1881, pp. 16–19.

[2] Text-book, 4th edition, 1870, p. 423.

[3] Graefe-Saemisch's Handbuch, Vol. iv., No. 1, pp. 94–101.

[4] Wecker-Landolt, Traité Complet d'Ophthalmol., 1878. Tome 1, p. 320.

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Croupous conjunctivitis begins with the symptoms of an acute catarrh or mild blennorrhœa, but soon characterizes itself by the deposition of whitish membranes on the retrotarsal folds of both lids, extending towards the fornix of the conjunctiva and the free edge of the lids as far as the so-called papillary body is found. The membranes consist of coagulated fibrine enclosing lymphoid cells in varying quantities. They may cover the palpebral conjunctiva in patches only, or as continuous layers of 0. 1 mm. to 1.5 mm. ($\frac{1}{250}$ to $\frac{1}{16}$ in.) in thickness. They can be more or less easily wiped off, and are quickly reproduced. The surface from which they are detached is dark-red, easily bleeding, uneven, not ulcerous, but finely granular. The lid is moderately swollen, not very sensitive, and can be everted without much difficulty or pain. The discharge is sero-mucous, or sero-puriform, and moderate. The progress of the disease is marked by the uneven swelling of the papillary body passing over into proliferation, with the production of smaller and larger cauliflower and polypoid excrescences. The pseudo-membranes cover all these productions, dip into the depressions and crevices of the proliferous conjunctiva, and cannot be detached without lacerating and tearing off portions of the conjunctiva, thus causing effusion of blood, which shows a high degree of coagulability. Croup, in contradistinction to diphtheria, seems never to affect the scleral conjunctiva, and only exceptionally the cornea, there producing ulcers. These ulcers may be superficial and disappear in a short time, or become more extensive, occupy and destroy the whole cornea. From their whitish aspect and firm, even surface, which is rather raised than depressed, I am inclined to believe that they also are covered with a croupous deposit. Even in that stage they are capable of restitution, leaving an unexpectedly small corneal patch when compared with their former size and intense milky opacity. They are complicated with consecutive plastic iritis, which may get well without adhesions or pupillary obstruction.

Course.—The milder forms of the disease are not infrequent, the severe ones very rare. The characteristic croupous stage seems to follow the catarrhal initial symptoms in a few days, may last for one or several weeks, or from two to six months. When the membranes disappear, they get softer, thinner, and

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brittle; the discharge then is muco-purulent, but still moderate when compared with genuine blennorrhœa.

The *nature* of the disease consists in swelling and proliferation of the papillary body of the conjunctiva, and the formation of fibrinous pseudo-membranes, which are interspersed with lymphoid cells and deposited on the surface, without infiltrating the tissues of the lid.

Its *causes* are those of catarrh and blennorrhœa. The disease is contagious and mostly affects both eyes. A constitutional predisposition may, perhaps, be admitted, as the catarrho-blennorrhoic conjunctivitis, which in asylums goes from one inmate to the other, only in a few assumes the croupous character. Croupous conjunctivitis, like pharyngo-laryngeal croup, is prevalently a disease of childhood. Some patients have croup of the eye and throat simultaneously.

The *prognosis* on the whole is favorable, the disease showing no marked tendency to affect the cornea, and, unlike diphtheria, leading to no gangrene of the parts affected.

As to the *treatment*, I can only concur with Arlt and Saemisch, in advising to abstain from all kinds of irritant medication as long as the formation of the pseudo-membranes is still active. Uninterrupted application, day and night, of iced compresses to the lids, and careful washing away of the secretion with a soft sponge, dipped in a very weak solution of chloride of sodium, chlorate of potash, and the like, should be enforced so long as the inflammation is progressing or at its height. As soon as the swelling decreases and the membranes break off, the cold applications may be limited to an hour every morning, noon and evening, and gradually left off. Weak solutions of nitrate of silver then seem to be the best remedy, also mild touching with the sulphate of copper crystal acts beneficially. Saemisch thinks that in a few mild cases he has cut short the progress of the disease by dusting powder of sulphate of quinine on the affected conjunctiva. I have no experience in the use of quinine in this manner, and Saemisch himself warns us not to use it in severer cases, lest the powder, acting as a foreign body, stimulate the inflammation.

Mr. President, I beg to take this opportunity for making some remarks **on the utility of methodical applica-**

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tions of cold in the severer forms of conjunctivitis and on the general management of these affections. They are all contagious, yet not in such a manner that an affection through micro-organisms or other substances floating in the air need be feared. Practically the disease is transmitted only by inoculation. Under proper care, the most virulent gonorrhœal or diphtheritic inflammation of one eye is never transmitted to the fellow eye, even if left open, a fact of which I have convinced myself by hundreds of cases treated in hospital or private practice. Under proper care? What is proper care? Gentlemen, proper care is two skilled and trusty nurses, the one for the day the other for the night, who never leave the patient; further, a rational physician who is not too meddlesome a therapeutist. I speak now of ophthalmia neonatorum, blennorrhoic or gonorrhoic ophthalmia of the adult, of croupous and of diphtheritic ophthalmia, also of the acute stage or acute paroxysms of trachoma. The treatment of all these cases is the same and amounts to this: *so long as the disease is on the increase or at its height,—abstinence from all but indifferent local remedies, methodical and uninterrupted application of cold, and careful cleansing; in the stage of decline—the same treatment in a milder form; in torpid or protracted cases—astringents or mild caustics.*

The infant of three days and over, who has blennorrhœa, should have cold applications day and night by means of thin iced compresses which cover no more than his burning eyelids. Every fifteen to thirty minutes the lids should be gently separated and the secretion carefully washed out with a fine soft sponge, dipped in a very weak solution of common salt, chlorate of potash, and the like. Several sponges should always be at hand, kept in an abundance of pure water, so as to keep them perfectly clean. Gentlemen, there is no cleansing material equal in softness and efficiency to fine sponges. To see that they are free from infection is our business, and a very easy business it is, for among all the disinfectants there is one which unshaken has stood the test of time: abundance of water. There is no contagium that is not made harmless by sufficient dilution; contagia can all be drowned. As soon as the little sufferer shows the least tendency to open his eyes, he should be encouraged in his endeavors. Darken the room

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moderately, so that the influence of bright light does not make him shrink. The opening of the eye is beneficial in two ways:

1st. The movements of the lids beat the corrosive secretion out of the conjunctival sac.

2d. They accelerate the circulation in the affected parts, thus diminishing congestion, stasis, and infiltration.

We know that the venous circulation in the extremities of our body is materially favored, I mean mechanically assisted, by muscular action. When a child opens his eyes, the danger is over; only a relapse must not be allowed to occur. The iced applications have to be continued, until the swelling of the lids and the creamy character of the discharge have disappeared. Gentlemen, no child need lose its eyes from opthalmia neonati, and no child does, if faithfully treated in the way just described. I unhesitatingly commit myself to this assertion, since the cases over which I have had full control, have terminated favorably, and they count, not by the dozen or hundred, but by the thousand. Other modes of treatment may be good—and there is no doubt that certain eyes escape destruction under all kinds of treatment—but the one pointed out is capable of saving them all, and only in order not to be absolute I admit the restriction of saying "almost all." But, gentlemen, great and incessant care is needed. Prophylactic measures, such as cleansing the vagina before and during delivery, and washing the child's eye with weak, so-called antiseptic solutions, of which nitrate of silver $\frac{1}{10} - \frac{1}{4}$ per cent. is the best, may be useful, and need only be mentioned.

I cannot speak with the same satisfaction of the results of the treatment of gonorrhoic ophthalmia in adults, though the same plan of treatment, pursued with the same rigorousness and persistency, saves, as far as my experience goes, the great majority of cases. Slitting of the outer commissure, if there be great tension, is beneficial, but can almost always be avoided, since the cold keeps the swelling down. The proposition of Critchett, of London, to divide the upper lid in its centre, in order to save the cornea from destruction, need certainly not be adopted.

What good the application of cold may do in *croupous ophthalmia*, is exemplified by the two cases reported at the beginning of this paper.

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In *diptheria* of the conjunctiva I know of no more important remedy than the energetic and persistent application of cold. I cannot countenance the proposition of Mooren and Berlin, by warm applications to abridge the true diphtheritic stage and lead the process more quickly over into the less dangerous blennorrhoic stage, since I am convinced that nothing is so powerful in diminishing the violence of this dreadful inflammation as cold, and I am afraid that warmth may temporarily increase it and favor destruction of the cornea. I have to differ from the statement of Dr. Noyes and others that diphtheria of the conjunctiva is a very rare disease in New York. My former assistant, Dr. Born, has taken notes of over seventy well marked cases during the three years that he was house-surgeon at the Ophthalmic and Aural Institute. The great majority of those cases, as well as others in my private practice, were cured under the above plan of treatment, persistently carried out.

What good the same plan, though less rigorous, may do in severe cases of *trachoma*, few persons who have not witnessed it would believe. A patient may go for months and even years to the dispensary, and there show the usual alternation of better and worse, till a new crop of granulations, or blindness from corneal opacity, compels him to enter the hospital. He is treated with iced compresses several hours during the day, is directed to dip his face into cold water, and is admonished by every moral effort, assisted, if necessary, by mechanical appliances, to hold his eyelids open as much as possible; his lids are touched with the sulphate of copper crystal, and the improvement in most cases is very marked, not to say astonishing. In the course of three or four months I have seen trachomatous lids restored to a healthy condition with scarcely perceptible cicatrices, and a trachomatous cornea through which fingers could not be counted, so much clear up that fine type could be read.

Gentlemen, what I have said is only a sketch, and, if I did not trespass on your time and indulgence, I would fain say more, for I am deeply impressed with the fact that among all questions in ophthamology—that of cataract perhaps excepted—there is none so important as the treatment of contagious ophthalmia.

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XII.—NOTES ON CONTAGIOUS DISEASES OF THE EYES IN SCHOOLS AND ASYLUMS.

BY CORNELIUS R. AGNEW, A. M., M. D., NEW YORK.

Many evils exist in the method of treating children upon the congregate plan in schools and reformatories. I propose in the following brief chapter to call attention to one of them which does not seem to attract the attention its gravity demands. I refer to communicable eye disease. I constantly see in my practice at the Manhattan Eye and Ear Hospital, New York, and elsewhere, patients who have contracted these diseases and got as a consequence, some lesion of the palpebral conjunctiva or cornea, which has either resulted in blindness or such impairment of vision, or of the power of endurance of their eyes, as to reduce greatly the industrial capacity of the individual.

Diseases of the conjunctiva, and of the cornea are largely the cause of prevailing blindness, and yet they belong in a great degree to the class of preventable diseases. The fact that they do fall into this class gives to the sanitarian and to the legislator a special opportunity and advantage for inquiry, advice, and legal enactment to limit or prevent their prevalence.

Some time ago I was called to a school, in one of our counties, in which several hundred children had been gathered, chiefly from the streets of the city of New York. I found more than half the inmates suffering from a malignant type of purulent opthalmia. The disease had rapidly become epidemic in the school and dormitories, until the proper educational work of the establishment was suspended, and the insufficient energy of its entire force of teachers and nurses turned to fight the invader. Before I was called, several cases of blindness had occurred, both among the scholars and their attendants, five children having lost both eyes and seventeen children having each lost an eye.

At my visit, more than half the inmates of the school, or nearly one hundred and fifty scholars, were found suffering from acute, communicable, purulent inflammation of the eyes in its various stages. I estimated that at least five percentum

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of these cases would become blind from the acute processes in one or both eyes, and that a considerable number, probably one-half, would have such morbid changes produced in the conjunctiva or lining of their eyelids as would render them liable to constantly recurring inflammation, thus impairing their comfort and usefulness, lowering their industrial capacity and threatening them with constantly impending blindness.

These children, largely of Irish parentage, had been gathered in the streets of New York, and snatched, as it was supposed, from the dangers which surrounded them. A considerable number, as I was informed, had been committed to the school through the agency of one of our most active protective societies. As I stood amid the little victims, a conviction of the crudeness and ignorance which mark so many of our attempts at benevolence penetrated me. Here was a mass of little sufferers gathered from the scenes of squalor and neglect in a great city, committed to a school in which their interests, physical and religious, were supposed to be protected, but in which there was an absence of the conditions which were essential to their bodily health and safety. Several conditions existed in this school, favorable to the development of the horrid epidemic.

1. Imperfect quarantine.
2. Bad, or insufficient lavatories.
3. Overcrowding.
4. Bad food.
5. Bad drainage.

The mere presence of such disease in a school, or reformatory, is censurable. If it gets into, or originates there, it is a serious reflection upon its management. If it spreads, it shows that the internal police of the establishment is bad. Every candidate for admission to a residential public school, or school dormitory, should be examined by an expert to ascertain whether he has a communicable eye disease. Especially should this be done in schools and reformatories maintained for the good of the poor and degraded, since it is largely among these classes that communicable eye diseases prevail. There should be a competent medical officer at the reception quarters of every such school, capable of turning the eyelids of candidates and ascertaining whether they have catarrhal affections.

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It may not be possible, or wise, to turn back into society cases of communicable eye disease, as they may have been committed for vagrancy or other good cause. Moreover, it is better that such cases should be kept where they may be skillfully treated, and thus so isolated as to cease to be the sources of dangerous contagion. Every school and reformatory should have ample provision in the form of wooden shanties or tents and play-grounds to safely treat such cases till they shall have been carried beyond the point at which they cease to be foci of disease for others.

But as these diseases, so fatal to vision, may in spite of all available caution get into the schools and become endemic, we must insist that their known causes be, so far as possible, guarded against. It is certainly competent for the State to enforce the rules which would reduce the risk of such communicable diseases occurring in all schools and reformatories that draw any portion of their maintenance from the State treasury, or exist under a State charter.

Let us, then, consider the conditions which favor the introduction into, and prevalence in a school, of such communicable eye diseases.

1. The conditions which lead to the introduction of the communicable catarrhal eye disease into a school or reformatory.

A child is taken by an agent of * * * or some other representative of law or philanthropy, and with more or less haste is run through the judicial mill and committed to a school or reformatory. If such a child has catarrhal disease of the eyes, or granular lids, the chances are that it will become a vehicle of contagion to the school. If such a child had small-pox, it would not be let loose to spread the malady in a school; and yet that disease would be comparatively harmless in a school in which vaccination had been properly done. But there is no such protection against catarrhal or purulent eye disease. The lesson, then, is that the safety of children in such institutions demands that a proper examination be made of every child before he is admitted to see whether he has catarrhal eye disease, that he may, if the disease exists, be so domiciled as not to communicate it to others.

Furthermore, as the disease may originate in a school from overcrowding and bad food, the committing parties should see

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to it that children are not sent to institutions in excess of their sanitary accommodations, nurses and other resources.

If a child cannot be provided in an institution with a thousand cubic feet (28 cub. meters) of air in the dormitories and class rooms, and be guaranteed, also, abundance of milk and facilities for being nursed and kept clean, then it is better that it be allowed to run in the streets, getting, at least, the physical benefit of the "wild ass," till caught by the beautiful hand of the Children's Aid Society or the Industrial Schools, and sent off to the West and into rural life.

2. We would now consider briefly causes which lead to the spreading of catarrhal eye diseases in such schools or reformatories.

a. Imperfect quarantine.
b. Bad lavatories.
c. Overcrowding.
d. Bad food.
e. Bad drainage.

a. *Imperfect Quarantine.*—We have already alluded to the necessity for examining carefully the eyes of children sent to residential schools and reformatories. This would of course involve more knowledge and care on the part of those who gather the children and commit them to the institutions. It would also involve proper provisions within such institutions, for the isolation and treatment of those who enter them with communicable ophthalmia. It is eminently *improper* to have what are commonly called ophthalmic wards of the conventional type. Such places are very defective, and tend to develop an atmosphere which soon saturates walls and furniture and to beget disgusting hospitalism. I saw, some time ago, such a night ward in a garret where the inmates had less than 170 cubic feet (5 cub. meters) of air each. Wilde, in his tract, alludes to the fact that in the epidemics referred to, the disease seemed to be reproduced most freely *at night*, and no doubt from the effects of overcrowding, bad air and actual contact of individuals.

These cases should be treated, except during the coldest weather, in tents, or throughout the year in wooden shanties raised above the ground by underpinning, and with ample rooms to enable the children, so isolated from the entire healthy inmates, to have such instruction and amusements as

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may be necessary for their best moral and physical interests. They should have the largest amount of out-of-door life to improve their tissue building, as defective tissue building is at the bottom of chronic ophthalmia. A healthy child getting catarrhal conjunctivitis will, as a rule, make it self-limiting, and throw off the malady without any incorrigible tissue lesion if its nutritive processes are not degraded by bad hygiene.

b. *Bad Lavatories.*—It has been and still is the practice in some schools and reformatories, to have insufficient or badly arranged lavatories. The children are allowed to rush in masses into damp and reeking basements, where they wash in common. The process of washing is too often a mere smearing of the face or a rubbing of dirt into the eyes, and then a chance grab at an omnibus towel. In many schools and reformatories this evil has been lessened, but in very few of them has the matter of careful, separate ablutions been duly provided for. Every child should have its own place for washing, with due privacy and adequate attendance and an individual towel. Cases of "chronic sore eyes" should have distinct arrangements and ample provision made that the eyes may be gently and thoroughly cleansed, at least twice a day, and the edges of the lids properly anointed to prevent the accumulation of secretions among the eyelashes, from which they so readily get to the eyes of others. The local treatment of the acute cases does not properly fall to be considered in this paper.

c. *Overcrowding.*—Of all the causes mentioned, it is not easy to estimate which is the worst. All sanitarians will, however, agree that overcrowding is a most fertile cause and aggravation of sickness in every variety. It is probably the most common and, therefore, the most universally damaging. *Crowd poison is a most subtle and most fatal poison.* Alcohol and syphilis produce results which attract more attention, because some of them are very phenomenal, but they do not work the mischief which the presence in the atmosphere of invisible human filth does. It constantly poisons the blood of the sufferer, and *insidiously undermines his tissue-building* by day and by night.

Moreover, crowding makes it impossible to guard the sufferers against contagion and the rapid transportation of polluting secretions from a diseased eye to a well one. Flies and other

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insects become the conveyers of the contagium, and should be destroyed by the use of all the available traps and other means. *Light should not be excluded for this purpose, as that would enfeeble the children, and degrade their tissue buiding, and make the destructive effects of the disease greater.*

d. *Bad Food.*—What we have said of the effects of bad air applies in a measure also to bad food. The quality and quantity of the air supplied are closely related to the food supply. Indeed, the air we breathe is, in a very important sense, a food, or blood-making element. If the health of children in a public institution is largely due to the quantity and quality of the air which they have supplied to them, it is also very largely determined by the extent to which *milk* forms the basis of their dietary. Let children in schools and reformatories have a thousand cubic feet (28 cub. meters) of air space, each, by day and by night, and all the good bread and milk that they can be made to eat, and there will be insured comparatively good health. It is now as it always has been, that the badly fed are the first to fall victims to ophthalmia. I have read the tract of the late Sir W. R. Wilde, entitled, "Observations on the Epidemic Ophthalmia, which has prevailed in the workhouses and schools of the Tipperary and Athlone unions, Dublin, 1851." In this tract, great stress is laid on the relations existing between the disease and filth and starvation. He says, "the class of patients attacked were debilitated, starved female children, generally those recently admitted, worn out by previous want and privation of every kind.

e. *Bad Drainage.*—This is also a fertile cause of ill-health in public institutions. Not that we can yet safely attribute special diseases to particular germs, and say that they came up out of a sewer and seized a child by the eye or throat, and produced such and such a disease. But sewer air and polluted ground-air vitiate the atmosphere, and render it unsuitable for purposes of respiration and tissue-building. The annual reports of all public institutions should contain a certificate from an expert setting forth the known condition of their water supply and sewerage, and an effort should be made to so construct all lines of drains, that they may be in sight within the buildings, and easily overhauled outside of them at the time of annual scrutiny and report.

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The children gathered in our State schools and reformatories are largely drawn from the homes of our Irish fellow-citizens, and seem to be peculiarly liable to destructive or chronic affections of the conjunctiva. It must be remembered, however, that the catarrhal affection of which we are writing is very communicable, and may be easily imported into any school. A single case in a school, if not isolated, is like leaven. If the sanitary condition of the schools are good, it may not find congenial soil, or become rooted, or spread. If, however, the school is badly lighted, damp and overcrowded, and the dietary deficient in animal food; if the dormitories are crowded and the arrangements for the daily ablutions insufficient, or the basins and towels for congregate or promiscuous use, and the drainage bad, then we may expect evil to follow. I found, even in the hospital dormitory of the school to which I first referred, less than two hundred cubic feet (5⅓ cub. meters) of air per inmate, and the atmosphere loaded with impurities.

It is with great pleasure that I say to the credit of the medical man in attendance that he had only recently been called to the charge of the school, and that he was instituting reforms with intelligence, and as rapidly as the nature of the establishment would allow.

I advised that tents should be immediately set up in the fields near by, and the sufferers scattered beneath their shelter, assuring the non-medical officers of the school that the much dreaded light and air would only have a salutary effect. I also insisted with the doctor upon the freest use of milk in the dietary, and it was increased in quantity from fifteen quarts to four hundred quarts (14¼ liters to 380 liters.) The subject seems to be of such importance that I here give a note just received from the medical man in charge, refraining, of course, from publishing either his name or that of the institution referred to, as my object in writing this paper is to do good, and not to make a sensational point against any one, or to stigmatize those whom I intend quietly to help to do better things than they are now enabled by their present knowledge and economic resources to accomplish:

December 28th, 1881.

"DR. C. R. AGNEW:

DEAR SIR—In compliance with your request, I herewith send you a statement of the condition in which I found the institution in question. I was first called April 1, 1881. A

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strong odor of sewer gas pervaded the building, which proceeded from several foul and entirely unventilated pan water closets, the soil pipe from which emptied by means of a leaking sewer, which was also without trap or ventilator, into an adjoining privy vault, the discharge being entirely below the water line. No fresh air was admitted to the soil pipe or sewer. The kitchen and laundry waste was discharged upon the surface of the ground, *the latter under its floor*. The institution contained 308 children crowded together in close, unventilated rooms, sunlight and air being rigidly excluded. In one sleeping apartment *above* the laundry these children were placed two and three in a bed with *less* than *one hundred and twenty-five* cubic feet (3½ cub. meters) of air apiece, the windows and blinds being closed. Fortunately no water closets had been placed here, but two tin slop pails, placed in the center of the room, were used instead. The food was of poor quality. I believe but ten quarts (9½ liters) of milk were furnished daily. Two troughs, sixteen feet (4.9 m.) in length answered for a lavatory, all washing in the same water, while the few towels in use were employed indiscriminately. Sore heads were almost universal, dependent principally on the vermin inhabiting them. The itch was also very prevalent. I subsequently learned that several children had died from *cerebro-spinal meningitis*. Forty-eight children and attendants were suffering from fully developed purulent conjunctivitis. Perforation of one cornea had already taken place in three cases, of both corneæ in one case. *Six cases had been removed to hospital. Of these*, three lost both eyes. Three lost one eye each. The disease had prevailed the preceding year, just how extensively I was unable to ascertain; but the institution still contained five children who had lost both eyes, and seventeen who had lost one each at that time.

Of the remaining children, scarcely one could be said to possess a healthy conjunctiva. Between the months of April and September, since when no new cases have appeared, I treated among the inmates 129 cases of severe purulent conjunctivitis which ran their full courses, and 114 of a milder type. I this day examined 111 of those who passed through the same form with reference to the condition in which the conjunctiva had been left.

22 had healthy lids.
56 granular lids.
33 chronic conjunctivitis.

Many of the latter have hypertrophied papillæ, and I think that when they subside the granulations will appear. Except the cases before mentioned, but one child had perforation of the cornea. Under the directions of an experienced sanitary engineer, all of the old closets, plumbing and sewers were removed, new means of drainage introduced, and the premises

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placed in as good a sanitary condition as our present knowledge will allow. Finding it impossible to quarantine the great number of cases, the children were all placed in tents, where they remained throughout the summer and autumn. They were given as much good cow's milk as they could use. Great care was exercised that no child used another's basin, towel, comb, etc. Under the influence of fresh air and good food the disease soon disappeared."

The occurrence of an epidemic of purulent ophthalmia not only produces cases of partial or entire blindness, but spoils the integrity of the lining of the eyelids. This latter condition of proliferation or thickening of the eyelids, and production of so-called granulations is a most obstinate and incorrigible affection. It leads in very many cases to a life of troublesome eyes, to cloudy cornea and imperfect sight, or ultimately to ulcerations, staphyloma, and possibly destruction of one or both eyes.

The bad effects of this preventable malady are not confined to the limited school life, but run through the entire career of the sufferer, or make him a vehicle of contagion to others I have often seen an entire family inoculated by the arrival in their midst of a case from a public institution. I have seen it carried into a community and there spread by a child discharged from such a school. It will be seen that we have not only the acute malady to deal with, but the baleful after-effects, in blindness, chronic eye trouble and the spread of catarrhal eye disease in tenements and other communities. The authorities then, and those who make the reduction of the expenses of public charities the special object of their zeal, should become broader students of the matters they undertake to regulate. "There is that scattereth and yet increaseth, there is that withholdeth * * * but it tendeth to poverty." It would be easy to stamp out ophthalmia in public schools, if all who are interested would work in unison. We have so many societies to do charitable work, and so much pulling at cross-purposes, to catch each other, and to get sensational points for mutual recrimination, and so much tendency to use raw facts for temporary or selfish or political purposes, that one sometimes almost despairs of ever seeing a wise and generous economy introduced. I think that schools and reformatories should be licensed by the State under a general law like that, for instance, determining the capacity of

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emigrant ships so that overcrowding and bad food would be impossible without a misdemeanor on the part of their managers. The license should state in terms what cubic air space must be secured for each inmate, and what the dietary must be. Then no school or reformatory would have more inmates than the building should contain or its resources properly maintain, and societies for inquiry and advice would have some definite duties to perform with reference to them. The law should fix a minimum of eight hundred or one thousand cubic feet (22 to 28 cub. meters) of air space for every such inmate, and at least one quart and a half (1.4 liters) of good milk, of definite purity, besides other specified food for each inmate, and also determine methods of applying the principles for drainage and ventilation and out of door work and amusements.

All over our State there are schools in which the effects of overcrowding and insufficient food and other preventable causes of disease are telling disastrously upon the health of their inmates, and so are seminaries, or seed places, from which legions of children go out to recruit the ranks of long-lived paupers. There are also, as I well know, near this city (New York), institutions against which I make no complaint, and I purposely avoid any injudicious criticisms or comparisons.

Discussion (of the preceding two papers.)

Dr. C. S. BULL, of New York: Mr. President—I have for some years recognized the marked difference which exists between croupous and diphtheritic inflammation of the conjunctiva. I regard them as two distinct pathological processes, differing markedly in their course and in their destructive action upon the eyeball. Fortunately in this country, diphtheritic conjunctivitis is a rare disease. While agreeing with Dr. Knapp as to the great value of the methodical application of cold in the treatment of communicable conjunctival disorders, especially of the suppurative variety, and preferably by the application of light iced compresses or ice-bags, I cannot take such a hopeful view of the results of such treatment in all cases. While I believe that almost all cases of ophthalmia neonatorum can be cured and the eyes preserved by the most careful attention to cleansing and cold applications, as described in Dr. Knapp's paper, I regard gonorrhœal ophthalmia as a disease which does not yield so readily to the above treatment, and as one which is more virulent in its action, and too often results in more or less impairment of vision from corneal complications, in spite of the most judicious and energetic treatment. In the case of diphtheritic conjunctivitis, the outlook is even less hopeful. It has been my experience that at the great clinics of Europe and in this country, the majority of cases of diphtheritic conjunctivitis result either in considerable impairment of vision

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or in total destruction of the eyeball. Some cases are of course saved, but I regard the prognosis as unfavorable, mainly owing to the ocular conjunctiva becoming so densely infiltrated that the nutrition of the cornea is entirely interfered with, and it sloughs in consequence.

Dr. H. D. NOYES, of New York: Mr. President—While I fully comprehend the necessity for the most studious attention to cleanliness, to which attention has been directed by Dr. Agnew, together with proper hygienic measures, there remains still another matter which is within our control, and which has not been alluded to. It has been the current opinion among ophthalmic practitioners for more than two years past, that important benefit has been gained by the use of antiseptic solutions. Upon that question a very thorough trial has been carried on at the Eye and Ear Infirmary in New York city in the use of some form of antiseptic fluid, and especially of boracic acid. I am sure that I can speak with absolute confidence of the great benefit to be derived, not merely from cleansing with water, but better still with a saturated solution of boracic acid. It has a positive antiseptic influence which assists in removing not only purulent secretions, but also does good in that form of exudation which has been long recognized as croupous inflammation of the conjunctiva. There are some forms of gonorrheal ophthalmia which are but little amenable to treatment. A bad case of gonorrheal inflammation of the conjunctiva is almost sure to lead to destruction. And it may be, as has been conjectured, that the reason is to be found in the discovery that micrococci are present to a peculiar degree, and perhaps have a peculiar quality. This has been one of the recent results of pathological study, and it appears to be pretty well founded. But it is also a revival of an old observation, because these forms had been figured in the pus corpuscles of gonorrheal conjunctivitis in Hassel's work on pathological anatomy, edited by Van Arsdale, in New York, in 1851.

Dr. ROOSA, of New York: Mr. President—I heartily approve of the views expressed by Dr. Knapp with reference to the antiseptic power of water, and differ a shade from the general tenor of the remarks made by Dr. Noyes. I believe it is true that antiseptic surgery has come to the front, but I also think it will go to the rear in due time, and that the details of the principle enunciated by Dr. Knapp will take its place. I believe that the basis of all real antiseptic surgery is cleanliness, and that the basis of cleanliness is water. I believe that water is quite as inoccuous and bland, and, on the whole, as efficacious as boracic acid. Of course, it is a matter of experiment, and it is not yet settled. That such antiseptics as carbolic acid are absolutely necessary, I do not think has been maintained. I think we have an exemplification of the correctness of this view in the case of otitis media parasitica, where it had been demonstrated that large quantities of water did away with the need of any parasiticide. My conviction is that water is the best antiseptic yet known.

Dr. SHERWELL, of Brooklyn: Mr. President—Is it not reasonable to suppose that the beneficial effect of boracic acid can be accounted for upon the ground that it acts as a stimulant?

Dr. C. R. AGNEW: Mr. President—Inasmuch as all agree concerning the propriety of cold applications, something should be said with regard to the best methods of applying cold. I am very much opposed to "water slop," or water used by the common method of having a basin of water and applying it by means of a rag. I found in the School of Reform I have mentioned, that many of the cases of otitis had been produced by using water in this way; the slop trickling down the side of the face and finding its way into the external auditory canal. I believe that the

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true way to apply cold to the eyes is to take a block of ice, about the size of the U. S. Dispensatory, (8 by 15 by 25 cm.) place it in a basin and surround it with a towel, and then upon it a certain number of pieces of rag can be laid, and changed sufficiently often to keep up a constant refrigerating effect. In this way, also, none of the undesirable slop will run into the ears.

Dr. H. G. PIFFARD, of New York: Mr. President—Some eighteen years ago I had some personal experience in making cold applications to the eyes, as it was necessary to maintain them daily for nine months. I tried ice-water slop and the methed just spoken of by Dr. Agnew, but the method which gave me the best satisfaction for constant application of cold, and at the same time avoided the liability of the water to trickle into the mouth or ear, was to pack a small rubber bag with snow or cracked ice, and lay it upon the lids.

Dr. W. S. ELY, of Rochester: Mr. President—As a general practitioner, I may refer to the importance of preventing ophthalmia neonatorum. It has been my custom for several years, imposed upon me by disastrous results in one case, to examine the eyes of the new-born daily, with as much attention as the rectum and bladder are entitled to receive. If the general practitioner can be impressed with the necessity of recognizing the very earliest appearance of the ophthalmia, many serious results will be obviated.

Dr. KNAPP: Mr. President—The plan of treatment which I recommend is that upon which I have settled after many years of observation and study. With regard to the treatment of gonorrheal and diphtheritic ophthalmia there is a difference of opinion among the most competent practitioners. I only give the plan which has been the result of long study and experience. With regard to the relations of gonorrheal and diphtheritic ophthalmia, I can only state that my remarks were based upon a collection of seventy cases of marked diphtheria of the conjunctiva, of which I have notes.

Concerning the use of antiseptics, spoken of by Dr. Noyes, I know perfectly well that it is efficacious and that it is always well to conform to it, but whether it will last I do not know. I have not been deaf to it, yet I have not been so very willing to adopt all that has been put forth concerning it. I have used boracic acid, etc., and the result of my experience has been that these remedies are exceedingly mild and show no decided effect over mere cleansing with some medicated water, so it is not entirely pure, perhaps, one-half or one per cent addition of some salt, chloride of sodium being frequently used. I have reached the conclusion that *the essential* element is not these mild antiseptic washes, but it is the methodical, persistent application of cold and the cleansing.

Dr. E. R. SQUIBB, of Brooklyn: Mr. President—I may state, as a matter of fact, that water, with a small quantity of some salt in it, is very much more comfortable when applied to an inflamed conjunctiva, than water without such addition; for instance, water containing a small quantity of chloride of sodium. I received this instruction from the late Dr. Peaslee many years ago, who employed a weak solution of salt for washing out the peritoneal cavity, because it was so much more comfortable for the patient than simple water.

The famous nostrum known as Thompson's eye-water, consisted of one grain (gm. 0.065) of chloride of sodium, one grain of sulphate of zinc, and one grain of sulphate of sodium to the ounce (30 c. c.) of water, and doubtless owed its soothing properties to the small percentage of salts which the water contained.

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Dr. PIFFARD: Mr. President—The reason why water containing a slight quantity of some salt is more comfortable to the eye than pure water is, because the saline solution prevents the active endosmosis which occurs when simple water is used, and the consequent rupture of epithelial cells, which thus become a source of irritation as foreign bodies. It is the purely mechanical effect produced upon the epithelial cells by the simple water which gives rise to the irritation.

XIII.—OPTICO-CILIARY NEUROTOMY, OR NEURECTOMY, AS A REMEDY FOR SYMPATHETIC OPHTHALMIA.

By HENRY D. NOYES, M. D., New York.

The mischief which in certain cases of disease or injury of the eye may be conveyed to its fellow, is denoted by the name of sympathetic ophthalmia. The mode of conveyance is generally believed to be through the agency of the ciliary and the optic nerves. But Snellen has lately thrown out the idea that the channel of conveyance is through the lymphatics which accompany the ciliary nerves.

It has become the settled practice of the present time, founded on the experience of twenty years, to enucleate the offending eye in order to protect the remaining one. In many cases the symptoms in the second eye are what are termed simply irritative and consist of various nervous disorders. In other cases the symptoms are inflammatory, and affect chiefly the uveal tract, and may be more or less severe.

The offending eye may show tenderness, irritability, and, perhaps, a recognizable inflammatory condition; or, on the other hand, it may be entirely devoid of symptoms. On the part of the eye secondarily affected, the primary affection may be irritative, and pass into the inflammatory, or the irritative may continue a long period, perhaps indefinitely, without developing the inflammatory condition. Again, inflammatory conditions may be primary without precedent warning, and they are apt to begin in a subtle and inconspicuous manner, although more pronounced processes may take place

Experience has shown that enucleation of the offending eye will remove the irritative symptoms almost without fail. Moreover, enucleation will remove the inflammatory symptoms if it be done at a sufficiently early period. Enucleation performed after active irido-choroiditis has set in is, by some,

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asserted either to be unavailing or to be positively noxious to the remaining eye; but my own conviction, founded upon extensive operation, is to the effect that enucleation renders benefit to the eye whose safety is sought for, in whatever stage of inflammation it may exist. All observers, however, agree that, to derive satisfactory advantage by an operation for sympathetic ophthalmia, this operation must be performed before *pronounced* inflammatory symptoms have taken place in the other eye. Enucleation is, therefore, performed as a preventive before any symptoms shall have occurred, it is performed when irritative symptoms have already set in, and it is performed in the early stage of inflammatory symptoms, and in all these cases with signal benefit. If delayed until inflammatory symptoms have strongly asserted themselves, while to a certain extent beneficial, it so far fails to control symptoms, as that deplorable loss of sight and a prolonged period of treatment, extending to months, is liable and very likely to be the issue.

An operation so radical as removal of an eye is naturally decided upon with hesitation, and is apt to be accepted with much reluctance. In many cases the propriety of enucleation is not absolutely manifest; such, for example, as the presence in the eyeball of very minute foreign bodies, which only partially destroy the sight, and create no irritation; or dislocation of the lens into the vitreous which may, for a long time, leave the eye innocuous; or, after an incised wound in the sclera, especially in the ciliary region, which may have destroyed the function of an eye, while the correctness of its appearance may be sufficient reason for retaining the organ. Many other conditions might be enumerated, which, for a certain period of time, do not give rise to sympathetic trouble, and render enucleation apparently superfluous. Moreover, when there are sufficiently clear indications to call for enucleation, as judged by a physician, the patient either for himself, or a parent for a child, may be utterly opposed to such mutilation. In early life, the removal of an eye is always undesirable for two reasons: 1st, because the wearing of an artificial eye for a long time gives rise to chronic irritation and shrinking of the conjunctiva which, in the end, will result in contraction of the conjunctival sac and inability to wear the shell. 2d, the removal of the eyeball in very early life is accom-

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panied by lack of development in the orbital tissues and in the orbit, which makes the parts in adult life unduly small, and the symmetrical appearance of the eyes is not secured. For these, and for other reasons, enucleation may be refused when really necessary, and a considerable class of doubtful cases exist for which it has grown to be the custom to decide according to the intelligence of the patient and his accessibility to competent advice. That is to say, if the person for whom enucleation may come to be necessary is sufficiently observant of his symptoms, after having been instructed as to their nature and value, to act upon the warnings which he may get and present himself for an operation, or if he live where, after such warning, he may reach in due season a competent surgeon, such a person having been properly informed, he may be allowed to retain the injured eye until such time as necessity for its removal may arise. Practically, it follows that those who possess a dangerous eye, and are stupid or unobservant, or whose occupation takes them on long journeys or into remote places, are recommended to have the operation performed at once.

Recognizing these facts as constituting the ambiguous and undesirable side of the operation for enucleation, and in view also of the not inconsiderable annoyance which pertains to the wearing of an artificial eye, such as conjunctival irritations, necessary trouble, to the poor the expense of frequent renewals, as often as every twelve to twenty-four months, which is to them no slight matter, the proposition to substitute a less radical procedure for enucleation was naturally received with great satisfaction.

Such a proposition was made by Schoeler in 1878, who proposed to substitute the division of the optic and ciliary nerves in place of enucleation. Boucheron had independently suggested the same idea, and ten years before, Redard, in an inaugural thesis, had upon theoretical grounds brought forward this proposition.

Schoeler published thirty-eight cases in his first paper, and subsequently enlarged his number to sixty. Many surgeons took up the idea, namely: Schweiger, Hirschberg, Alfred Graefe; in France, Poncet, Abadie, Meyer, Warlomont; and in this country, Chisholm, Knapp, Wadsworth, Williams and others.

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The mode of operating, as first proposed, was to divide the nerves by means of a suitable knife carried behind the globe. This naturally left great uncertainty as to the completeness of the neurotomy. An improved method consisted in dividing first the optic nerve, reversing the eyeball, so as to present its posterior aspect in front, and then to dissect off, with fine pointed scissors, all the tissues upon the posterior aspect of the globe up to the implantation of the muscles. While a single section of the optic nerve was first proposed, namely, neurotomy, subsequently a portion of the nerve was cut out, constituting neurectomy, to which Schweiger, in the second edition of his treatise on diseases of the eye, gave strong endorsement. The mode of operation by turning the globe around through 180°, the cornea facing backwards and the posterior aspect of the sclera facing forwards, does not require a very large opening through the conjunctiva, and may be done without dividing any muscles, and is also done after section of a rectus muscle, either the externus or the internus. In whatever manner performed, an evident and sometimes serious risk is from hemorrhage; a thrombus forms in the orbit which may cause great inconvenience and sometimes serious reaction. The operation is therefore more severe than enucleation. From an enucleation, when performed under any other condition than general suppuration of the globe, the patient will recover in from three to four days. After an optico-ciliary neurotomy or neurectomy, the patient will be from ten days to four weeks in recovering, and exophthalmus always occurs, and may be very marked. Cases of suppuration in the orbit have followed neurotomy, and suppuration of the cornea has been observed. The cornea, in cases where the operation is thoroughly and correctly done, loses its sensibility. There is one case of death reported in print, and deaths have been mentioned which have not been reported in print. In a considerable number of cases, Hirschberg says in all of the eight cases in which he operated, sensibility returned to the cornea within some months. Other observers have in a percentage of cases, proportion not known, reported the same occurrence. This has been interpreted to mean, that the ciliary nerves have become reunited. In some instances where enucleation has followed neurotomy, the optic nerve has been found to have grown again to the stump; this occurs,

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however, after neurotomy much more frequently than after neurectomy. For about two years the general opinion concerning this operation was exceedingly favorable. In 1880 a report upon sympathetic ophthalmia, as clinically observed in Prof. Alfred Graefe's clinic in Halle, was made by Dr. Bunge, at the close of which he gives the experience in fifteen cases of neurectomy. Out of this number, he says that the ultimate result in 1 was good, in 5 was unknown, and in 9 was failure. Of these 9 cases, enucleation had been actually performed or its necessity became urgently indicated.

Leber reported in Graefe's Archives of Ophthalmology a case of optico-ciliary neurectomy, which was succeeded afterwards by sympathetic inflammation of the other eye, and the same ineffectual result has been reported by others. In so many instances has this been observed that Poncet read an article before the International Ophthalmological Congress in London in 1881, attempting to explain how such a result could occur after this operation.

A very interesting circumstance in connection with the operation, is that the enervation of the eye, as the operation is sometimes called, when performed because of the acute sensitiveness to touch in the ciliary region, is followed by relief of this symptom; and, in many instances, this relief is permanent. But it has also been observed that the sensitiveness to touch may be re-established within a few weeks. My own experience in this operation has been limited to six cases, three of which were in eyes partially atrophied, because of penetrating wounds. They were sensitive to touch, and the fellow-eye exhibited only moderate or no irritative symptoms. In two cases the eyeball had been severely injured by a blow, and, while the other eye remained unharmed, it was not deemed safe to expose the patient to the risks of sympathetic ophthalmia.

In the *sixth* case, which was my last, the operation was performed for staphyloma of the cornea, which extended partially into the ciliary region, whereby the eye had become so much enlarged as to be a deformity. The patient was a girl seven years of age. The operation was performed simply with the view to effecting a reduction in the size of the distended globe without solution of its continuity.

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This suggests the remark that the effect of neurotomy or neurectomy in the larger number of cases, is to produce reduced tension and a reduction in size, which is sometimes moderate, and at other times very considerable. This reduction in size is to be accounted to the disadvantage of the operation in the larger number of cases for which it is proposed. The reduction in tension which it gives has led to its application in some cases of absolute, painful, incurable glaucoma, for which, otherwise, enucleation would be necessary. Out of my cases, three, namely, the first three, have done well. In no instance has the immediate effect of the operation been disastrous. In two cases hemorrhage has been excessive, and reaction severe, while a permanent strabismus may or may not occur. In the last case, namely, that of staphyloma, still under observation, no final report can be made, although the prospect of satisfactory reduction in size is very fair. In one of my cases, namely, one where a wound had been inflicted, orbital hemorrhage was most severe and produced exophthalmus that compelled me to divide the external canthus, in order to reduce the globe through the palpebral fissure and to retain it there by stitching the lids together. The patient recovered from the immediate effect of the operation, was relieved of the exquisite sensitiveness in the ciliary region that had existed, and went out of the Infirmary with an eye whose appearance was satisfactory. In three weeks he returned, having a repetition of the ciliary tenderness and a recurrence of the inflammation; the other eye began to exhibit irritative symptoms, and enucleation was performed.

In estimating the general value of the procedure, it must be stated that it is of uncertain efficacy; that it is an operation liable to serious risks in itself; that it is somewhat difficult to perform; and that it has been followed by fatal results.

On the other hand, enucleation has not in all instances protected the fellow eye, even when performed under conditions considered suitable. At a recent discussion in the Pathological Society in London, Mr. Nettleshiff brought forward *seven* cases of this kind. Moreover, it is a fact established by experience, that enucleation may not in the first instance arrest the sympathetic trouble, which, being in an early stage, would seem to warrant the expectation that removal of the eye would accomplish the desired cure. It must be added, as an offset

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to this statement, that a secondary operation in an orbit from which the globe has been removed, consisting in dissecting out the cicatricial tissue and the stump of the optic nerve, has sometimes succeeded in bringing to a conclusion sympathetic inflammatory symptoms which enucleation had failed to annul. The reason why enervation in the much larger percentage of cases has failed to relieve sympathetic trouble, and to secure permanent relief, is evidently because a mass of connective tissue has, in very many instances, formed at the apex of the orbit as the necessary result of the operation, and this may be a sufficient reason for determining the propagation, along the optic and ciliary nerves, of the mischievous influence in question, until it shall reach the opposite eye. We must, therefore, conclude that optico-ciliary neurectomy cannot be commended as a substitute for enucleation in any large proportion of cases; that if suitable it must be confined to a limited class, viz.: those of a character in which threatening symptoms may, at the time, be very slight, in which the subject must be very young, and in which the operation shall not have been attended with severe hemorrhage. Moreover, even in these cases, it is to be resorted to as of uncertain and, perhaps, only temporary value; and, therefore, must on the whole be an operation of quite exceptional performance.

On the other hand, experience is still more emphatic in confirming the necessity of removing the dangerous or the offending eye at the earliest period, and that by this alone can the patient be offered reasonable assurance, amounting almost to a certainty, that he will preserve one eye intact.

Discussion.

Dr. HARVEY JEWETT, of Canandaigua: Mr. President—A lad fourteen years of age is under my care at the present time. About six weeks ago, a duck shot, number 4, passed from the muzzle of a gun up the side of the face and neck and entered the eye. It entered just at the junction of the cornea with the sclerotic in the ciliary region. There was hernia of the iris, but the entire aqueous humor did not escape. I said to the friends that there was danger of sympathetic disease of the other eye, and suggested removal of the injured eye to prevent it. The operation was objected to. I then said, we will let it go on for thirty days, watching it very carefully, but after the twenty-sixth or twenty-seventh day, after taking a ride in the wind, contrary to orders, the eye was worse, and I then told him that he must visit me every other day; but he went away and was absent a week, and when he returned the fellow eye had taken on sympathetic disease. He is now entirely blind in the eye into which the shot entered, and very nearly blind in the other. He will ulti-

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mately be blind in both eyes, and doubtless because the parents refused to have the injured eye removed at an early date.

Dr. H. KNAPP, of New York: Mr. President—I fully endorse all that Dr. Noyes has said about the importance of preventing sympathetic ophthalmia, but do not think that the operation of optico-ciliary neurotomy or neurectomy is still in great favor among oculists; the time when it was, soon passed away. At present the operation is considered with disfavor by many operators, for the following reasons: 1. The restoration of the sensibility of the cornea is the rule, not the exception. 2. The operation is inefficient, as in some cases it has not prevented the occurrence of sympathetic ophthalmia; incidental cases are reported by Mauthner, Hirschberg, Leber and others. 3. It has led to suppuration of the orbit and eyeball, and in the discussions at the International Medical Congress even the occurrence of three, perhaps four fatal cases, was rumored. I have performed and published, in 1880, nine operations of the kind. They all did well with the exception of one in which gangrene of the globe and a part of the orbital tissue and lids ensued, making it difficult to model the stump in such a way that an artificial eye could be worn. Since that time I have not performed the operation any more, though for certain conditions I still consider it not only justifiable but even appropriate. Prof. A. Graefe, of Halle, as is seen in an elaborate monograph from his assistant Dr. Bunge, condemns the operation altogether.

Dr. ROOSA: Mr. President—It is my impression, also, that the opinion of ophthalmologists is decidedly adverse to any further trials with this operation. If I understand correctly the tenor of the discussion in the Society to which the gentleman who read the paper and myself belong, while it did not go so far as Dr. Knapp has expressed, I think it was an almost unanimous opinion that this operation had as yet failed to plant itself as a substitute for enucleation in preventing sympathetic ophthalmia. I am not willing to let the Society believe that I, at least in my teaching, consider it for a moment.

Dr. LUCIEN HOWE, of Buffalo: Mr. President—There is evidently a very decided difference of opinion existing between Dr. Noyes and Dr. Knapp, and this does not surprise me, for, when a phase of the same subject was under discussion in the ophthalmological section of the International Medical Congress in London, last August, I observed that the views of those present were also somewhat at variance.

Certainly much is to be learned concerning the treatment of this class of disorders. But if an operation is to be resorted to in cases of sympathetic trouble, when the original lesion is simply a wound, I prefer, for one, a method not mentioned by either of the gentlemen who have spoken. Graefe and Snellen were among the first employing it, and it consists in dividing those ciliary nerves which emerge from the globe in the vicinity of the wound. The area of the sclerotic thus denuded is larger or smaller in proportion to the extent of the lesion, or the degree of sympathetic trouble. It may be necessary, in order to accomplish the purpose, to divide one of the recti muscles and frequently to extend the incisions back to the optic nerve; but even with this it cannot be considered a really dangerous operation. It would seem, therefore, to possess the advantage of lessening the irritation which may be conveyed through the ciliary nerves, and especially from those most apt to be involved in the morbid process. If it fails, nothing is lost; if it succeeds, the patient has saved an eye, which, at least, looks well.

Dr. NOYES: Mr. President—My statements are made merely in the way of communicating information and progress. The report of the proceedings of the International Congress has not been published as yet, and there has been no statement of

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the occurrence of any fatal cases. My report is founded upon published experience, and I propose to revise my paper, so that when printed it shall lay the matter clearly before the minds of the profession as it stands at the present time. I am only thankful for the information which has come from my associate, Dr. Knapp, and which he has communicated to the Society.

XIV.—ON THE PHYSICAL DIAGNOSIS, BY MEANS OF PERCUSSION AND EXPLORATION BY PUNCTURE, OF PERITONITIS WITH AND WITHOUT PERFORATION OF THE ALIMENTARY CANAL, AND THE EMPLOYMENT OF ASPIRATION IN CASES OF PERFORATING PERITONITIS.

By AUSTIN FLINT, M. D., New York.

Of the various causes of acute diffuse peritonitis, traumatic and puerperal cases being excluded, the most frequent is perforation of the alimentary canal. It is highly important to recognize this condition at the bedside, in individual cases, for several reasons. One reason relates to the prognosis. The prognosis is extremely unfavorable if there be intestinal or gastric perforation. Another reason has reference to the use of opium in the treatment. In all cases of acute peritonitis, opium is the "sheet anchor" in the treatment; but there is added a special object in the use of opium if perforation exist. Recovery is possible only by such a degree of induced arrest of peristaltic movements, as will allow adhesion to take place at the point of perforation. The practice of the future may furnish another reason. It may be that laparotomy will be found to be a life-saving operation in the cases. Opening the abdominal cavity, closing the perforation by proper surgical means, and washing out all irritating matters, it is not highly improbable will be a method of treatment sanctioned by its successful employment.

Correlatively it is of importance to be able to exclude perforation at the bedside in cases of acute peritonitis. One object of this paper is to invite attention to the proof against perforation afforded by a physical sign, namely, hepatic flatness on percussion. The exclusion of this cause is a ground for a favorable prognosis; it is to be considered in the use of opium

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in the treatment, and at a future time, perhaps, in deciding upon laparotomy.

Under normal conditions, flatness on percussion extends from about the sixth rib on the mammary line to the site of the lower border of the liver, that is, to the level of the false ribs. In cases of perforation of the stomach or of the intestine, gas in greater or less quantity escapes into the peritoneal cavity. The exceptions, if there be any, must be extremely rare. Gas within the peritoneal cavity, the patient recumbent on the back, will separate the anterior surface of the liver from the thoracic wall. This is probably true without exception, provided there be not adhesion of the entire anterior surface of the liver as a result of peritonitis, and adhesion sufficient to prevent the entrance of gas between the liver and the chest wall is rare. The presence of gas between the anterior surface of the liver and the chest wall gives rise to tympanitic resonance on percussion. I assume that in cases of peritonitis with perforation the normal hepatic flatness is always supplanted by tympanitic resonance. This statement is shown by experiments on the cadaver and by clinical observations.

The points which I make are these: if perforation be the cause of the peritonitis, there is more or less of gas in the peritoneal cavity; a stratum of gas will then separate the liver and the chest wall, giving rise to tympanitic resonance or percussion, and, hence, if there be persistence of the normal hepatic flatness, perforation as the cause of the peritonitis may be excluded.

It is only within a short time that my attention has been specially directed to this proof against intestinal or gastric perforation in cases of peritonitis. During this time, however, the following cases under my observation have exemplified its practical application:

In the case of a middle aged man, seen with Prof. Erskine Mason, of New York, and Dr. Furman, of Tarrytown, the history and symptoms pointed to perforation of the appendix vermiformis of the cæcum. The pain originated in the right iliac fossa, resistance to pressure was felt in this situation and the abdomen was notably tympanitic. Moreover, the general symptoms denoted so much gravity that a fatal termination was considered as highly probable. Hepatic flatness on per-

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cussion however was always found, and the recovery of the patient may be considered as rendering it almost if not quite certain that there was not intestinal preforation.

A woman of middle age seen by me in consultation with Dr. Lewis and Dr. Hutchison, of Brooklyn, presented the symptoms of acute diffuse peritonitis with enormous tympanitic distension of the abdomen. Hepatic flatness was well marked, and on this fact perforation of the alimentary canal was excluded. Death took place within twelve hours after my visit. The autopsy showed the recent passage of gall stones through an ulcerated opening into the duodenum. Two gall stones were found in the small intestine. There was no gas in the peritoneal cavity.

In the case of a young woman, a patient of Dr. Burrall, of New York, acute diffuse peritonitis was developed in the course of typhoid fever. There was moderate tympanitis in this case. Hepatic flatness was found on percussion. The case ended fatally and there was no autopsy. That intestinal perforation had not taken place was a fair inference, irrespective of the hepatic flatness, from the absence of the gravity of symptoms which perforation occasions, and from the fact that death did not take place for at least a week after the occurrence of the peritonitis.

So far as these few cases go, they show that hepatic flatness on percussion is proof against perforation of the alimentary canal as the cause of an existing acute peritonitis. A larger collection of cases is desirable, and a motive in submitting a paper at the present time is to interest others in testing the value of this physical proof.

Assuming that hepatic flatness on percussion is proof against perforation of the alimentary canal in cases of peritonitis, it cannot be assumed that tympanitic resonance over the hepatic region is always proof of perforation. The possibility of the colon being pressed upward so as to lie between the anterior surface of the liver and the chest wall has been demonstrated. But this occurrence is not necessary in order to explain hepatic tympanitic resonance on percussion. It happens not very infrequently that when the transverse colon is much distended with gas, tympanitic resonance is conducted upward so as to meet the pulmonary resonance. This conduction upward of tympanitic resonance from the colon renders the evidence

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afforded by percussion of the site of the lower margin of the liver very unreliable. If reliance were placed upon percussion, it would be necessary sometimes to conclude that the liver is wanting in its normal situation. This conclusion was actually reached in a hospital case under my observation. The patient had cirrhosis of the liver with some hydroperitoneum and a greatly enlarged spleen. It was reported to me as a case of transposed abdominal viscera, the liver being situated on the left side. The tympanitic resonance in this case extended to the upper margin of the liver where it became merged into the pulmonary resonance.

It is not an uncommon error to infer diminution of the size of the liver by measuring on the mammary line the distance between pulmonary and tympanitic resonance. On the other hand, percussion is not to be relied upon for determining enlargement of the liver, for the reason that the upper boundary of tympanitic resonance is no criterion for locating the lower margin of the organ. Here, however, we have a resource against the unreliability of percussion, namely palpation. The sense of resistance to finger pressure may be relied upon in ascertaining how far the liver extends below the false ribs, and the pulmonary resonance on percussion is reliable as indicating its upper boundary.

In order to show that the presence of air in the peritoneal cavity causes hepatic flatness to disappear and gives rise to tympanic resonance over the liver, the following experiment on the cadaver was made by Dr. Stone, house physician of the Third Medical Division, Bellevue Hospital, at my request and in my presence. It is proper to state that the experiment was suggested by Dr. Corwin, senior assistant of the Division.

The body of a man six hours after death presented considerable tympanitic distension of the abdomen. Hepatic flatness was limited, on the mammary line, to a space about an inch in its vertical diameter. Air was injected into the peritoneal cavity through a small sized canula which was attached to Bowditch's aspirating instrument. The trocar was introduced near the umbilicus. The hepatic flatness quickly disappeared, giving place to tympanitic resonance.

The body of a woman fourteen hours after death presented complete collapse of the abdominal walls and flatness on percussion below the sixth rib. There was considerable rigidity

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of the abdomen. Air was readily injected into the peritoneal cavity, causing distension and tympanitic resonance over the whole abdomen. The hepatic flatness at once gave place to tympanitic resonance.

In each of these experiments it was difficult to remove the air through the small canula by pressure over the abdomen, sufficiently to restore the hepatic flatness on percussion.

In order to obtain positive proof of the presence of gas within the peritoneal cavity, whenever in cases of peritonitis, tympanitic resonance extends over the region of the liver, there can be no objection to an exploratory puncture with a small trocar and canula. The puncture should be made within the hepatic region lest, possibly, if made elsewhere, the intestine might be wounded. The escape of gas through the canula is easily perceived by the touch and by the odor. Air injected and allowed at once to escape, acquires an intestinal odor. If desirable, the gas could easily be collected by attaching to the canula an oiled silk bag, or it might be aspirated and collected in a glass receiver.

The exploratory puncture thus supplies what is lacking as regards proof of perforation afforded by percussion; and by means of percussion and the exploring trocar in cases of peritonitis, it may be positively determined whether or not perforation exists. If hepatic flatness on percussion remain, there is no perforation of stomach or intestine. If, on the other hand, tympanitic resonance be found to extend over the region of the liver, all doubt as to the existence of a perforation is removed by an exploratory puncture in that region. It is hardly necessary to add that care is to be taken, in introducing the trocar, not to penetrate the liver; not that the wound will do harm, but because the peritoneal gas will not then escape through the canula. The liver has not been penetrated if, after withdrawing the stylet, the end of the canula which has been introduced be freely movable.

A late writer in a standard work on practical medicine (Ziemssen's Encyclopædia) says of acute inflammation of the peritoneum, "the only difficult question is whether the peritonitis be with or without perforation. To decide this point, we ought not rely on any one single well established physical sign, but make an accurate digest of the entire group of phenomena. Notwithstanding, the diagnosis in some cases must remain undecided." (Vol. VIII, page 208.)

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By means of the simple methods submitted in this paper, as it seems to me, the question whether the peritonitis be with or without perforation is divested of all difficulty, and may always be decided positively.

It is assumed, in this paper, that the presence of gas within the peritoneal cavity in cases of peritonitis, always denotes perforation of either the stomach or intestine. The question may be asked, is not gas sometimes a result of chemical changes in morbid products within the peritoneal cavity, perforation not existing? Without denying the possibility of gas being thus derived, it is, as I believe, a warrantable statement that the instances, if there be any, are so rare that they may be practically disregarded.

Recovery from perforating peritonitis requires, first, agglutination by means of fibrinous exudation, and, next, permanent adhesion by means of proliferating tissue, to some part with which the intestine or the stomach is in contact at the site of the perforation. It is obvious that the presence of gas within the peritoneal cavity must interfere with this requirement for recovery. Hence, arises the inquiry whether the removal of this gas may not prove to be an important measure in the treatment.

Aspiration is probably the safest and best method for the removal of the gas. When air is injected into the peritoneal cavity through a small canula, its entire removal is not easily effected even by firm pressure of the abdomen. The entire removal is shown by the disappearance of tympanitic resonance over the liver, and this resonance was found to re main after firm pressure in the experiments on the cadaver which I have related. Moreover, pressure on the abdomen sufficient to remove the gas in cases of peritonitis, would perhaps do more harm than the presence of the gas. Of the different aspirators I should prefer either my adaptation of Davidson's syringe to thoracentesis, or Bowditch's instrument, for the reason that they are more readily under control, as regards the suction force, than the aspirator of Dieulafoy. The puncture made by a small trocar causes so little pain that it might be repeated whenever the gas accumulated within the peritoneal cavity; or the canula, closed by a stop cock, might be allowed to remain and aspiration repeated as often as the resonance over the liver denoted the

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presence of gas. The aspiration might include the withdrawal not alone of gas but of effused liquid. The removal of the latter is desirable inasmuch as it may separate the site of the perforation from an adjacent part, and thus prevent closure of the perforation.

In order to demonstrate the possibility of the removal of gas from within the peritoneal cavity by aspiration, the following experiment on the cadaver was made at my request, by Dr. Thatcher, junior assistant, Bellevue Hospital; a trocar was introduced in the region of the iliac fossa, and attached to Boditch's aspirator. The injection into the peritoneal cavity of the air contained in the syringe twice, was sufficient to substitute tympanitic resonance for flatness in the hepatic region. Afterward, the trocar was introduced over the liver, and by suction with the instrument the tympanitic resonance was made to disappear and give place to the hepatic flatness which existed before the injection of air.

XV.—THE DIAGNOSIS OF POTT'S DISEASE OF THE SPINE BEFORE THE STAGE OF DEFORMITY.

By V. P. GIBNEY, A. M., M. D., of the Hospital for the Ruptured and Crippled, New York.

One hundred and ninety-six cases of Pott's disease of the spine came under treatment in the out-door department of the hospital during the year ending December 31, 1881, and of this number only *fourteen* came without any angular deformity. Six of this number were cases wherein the cervical region was alone involved, the remaining eight being equally distributed between the dorsal and the lumbar regions. We have, then, one hundred and eighty-two new cases of angular deformity from this disease in a single year.

This is my apology for the paper, and the present seems a fitting time to talk plainly and to urge upon the general practitioner, be he physician or surgeon, be he specialist or not, the vast importance of making a diagnosis early and before the mother or the nurse calls attention to the significant knuckle. It requires no professional skill to diagnosticate the

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disease then. The drift of teaching, I fear, within the past seven years, has been rather toward treatment than toward diagnosis. The cry has been for therapeutics and the cry has been heard.

Many a case of rickets and of simple antero-posterior curvature from anæmia has been encased in plaster of Paris from lack of proper diagnosis, and yet caution forbids us condemning the practice. If the treatment will prevent deformity it is better to err on the safe side. It is an outrage on science, however, to report such simple cases as Pott's disease and as cured by this or that plan of treatment.

A friend, whose teachings I value very highly, is reported to me as declaring in his lectures that the physician who cannot diagnosticate vertebral caries before the stage of deformity has no right to practice medicine. The professor is not an orthopædic surgeon either. I am not yet prepared to adopt that speech as my own. There is much teaching on this subject that is actually vicious, but some signs formerly laid down as pathognomonic are no longer urged as of any practical importance. I speak more particularly of tenderness on pressure over or percussion of the spinous processes. Nothing is to be gained by this procedure and a persistence in it often irritates the little patient to such an extent that a good examination is rendered practically impossible.

It may be laid down as a rule, with barely enough exceptions to prove the rule, that tenderness on pressure either with the hand or with the hot sponge is never present in the early stages of vertebral ostitis. So that in searching for an incipient caries let no reliance be placed on such a fallacy. I have in mind now a patient who did present tenderness early, but this was a female child and it is not at all unlikely that this was but the sign of an hysterical spine complicating the bone disease. Pressure over the spine posteriorly ought rather to relieve than cause pain where the bodies of the vertebræ are enlarged by recent inflammatory changes. The patient naturally carries himself in lordosis and that which aids his position gives relief. A weak or soft spot (apparently soft) is sometimes found by firm pressure along the spinous processes in rachitic children. Within the past three months two very intelligent families from different parts of the country have brought their children for mechanical treatment, and after an

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exceedingly tedious examination I failed to find any spinal disease. The parents came, it is true, without any letter or card from the physician in attendance, but were very positive in stating that he had discovered a weak, or soft spot, (pointing to spinous processes in the dorsal region) and had urged them to take the child without delay to the city for a brace.

Another test, very popular and constantly employed, I want to raise my voice against, for the reason that the abuse is so easy and the use even is unsatisfactory. It is the forcible pressure with the hand or blows with the same on the top of the head or shoulders in the long axis of the body. If the upper dorsal or the cervical region be affected this is actually dangerous, and it is not only true of recent cases, but all the more true of cases that have been under treatment for a time. The expedient is resorted to then to ascertain whether or not a cure has been established.

A few months ago I was on a visit to a friend in a neighboring town, and the mother of a patient little girl, terribly deformed, was my hostess, and while discussing that topic, ever supreme in her mind, said: "Dr. Gibney, I don't know now, with all my fund of experience, to whom I should go if my little girl were just beginning her sufferings." And she had had a varied experience in therapeutics, for her wealth had commanded distinguished talent.

The history she gave me was that when her daughter, now fourteen years of age, was only four she began to manifest signs of weariness on slight exercise, would seek various attitudes which would rest the spine, in fact, presented symptoms that persisted until nearly three months had elapsed, when a small "knuckle" was observed between the shoulders. An orthopædic surgeon was consulted, and he took the case immediately under treatment. For one year his skill and his assiduity were all that the most exacting parent could demand. His aim was to arrest the disease, and to prevent any further deformity, and his aim was certainly unerring. After a year's treatment he allowed the little patient to stand on its feet, removed the apparatus, and, in the presence of one or two members of the family, placed his hands on the child's head, firmly pressing downward. He was no feeble specimen of a man, and the weight upon that tiny head was more than

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it could bear. The patient winced under this crucial test, the limbs trembled all that day, and a restless night followed. Pain was felt in the back of the neck, and along the spine, and in remote parts of the body. Several days of irritation followed, the "knuckle" began to increase in size forthwith; the doctor was greatly annoyed that the case should act in this way, his interest seemed to wane, and in three months another specialist was consulted, under whose mechanical treatment the child became paraplegic. He, skilled as he was, got the credit of producing the paralysis, and other advice was sought. For several years the loss of power continued, the deformity grew into an *immense boss*, and, finally, on the return of power, abscesses made their appearance.

Now, I have not pictured this case to censure any one; I have simply narrated it to serve as a warning. It made a profound impression on me, for I had so often seen that "pressure test" employed, and in my earlier experience had practiced it myself. It is refreshing to read the remarks made by Mr. Howard Marsh in the *British Medical Journal* for June 11, 1881, concerning these same dangerous experiments. His paper is full of valuable instructions, and I cannot too strongly urge its close study.

The truth is that the nearer one comes to a knowledge of the pathology of the disease now under discussion the more easily can a diagnosis be made, and the more rational will be the interpretation of the symptoms. As Mr. Marsh says, we do not want to talk about *angular curvature*, or curvature of the spine. The term *spondylitis*, which some of my friends are attempting to introduce, is a confusing one to the student of pathology. That term was first employed, and is now employed, to designate a kind of arthritis deformans, the lesion being a rheumatic form of inflammation affecting the lateral masses and spinous processes, and never the bodies of the vertebræ. It is characterized by increase rather than by destruction of tissue. Julius Braun published, in Hanover, in 1875, a monograph on this affection as one of the most frequent causes of manifold neuroses, especially spinal irritation. He published fifty-eight cases, and drew a sharp distinction between this and spondylarthrocaries (spinal caries). In spondylitis we get very marked spinal tenderness.

If we understand that a very large proportion of all the

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cases of Pott's disease, especially in children, begin as a central ostitis of one or more of the bodies of the vertebræ, and understand that this ostitis is attended with swelling in the early stages, we can then understand the mechanical effect on nerves passing through the foramina of exit when any concussion or contortion accident occurs.

There are certain general questions to be settled in examining a case, and the first and most important is *the duration of the symptoms.* If we find the patient has been suffering vague and irregular neuroses for a fortnight or longer without any complete cessation of the same, we must know next *the behavior of the child at play or when getting into or out of bed.* If a slight strain or jar occur while the little one is at play this will be followed by an oral expression of pain, and relief will be sought in that position which will give rest to the spine. The mother, if you give her an opportunity, will tell you of many attitudes intuitively assumed. You need to know then *how the sleeping hours are passed*, and if you learn that instead of sharp screams without waking (so peculiar in hip disease) a moaning or restlessness with little cries on turning have been observed, then let the patient be stripped naked, and while this is being done the time can be spent profitably in getting the family history. I do not mean the reply to the questions, "Are you healthy?" and "Is your husband healthy?" You waste valuable time in propounding such questions. Ascertain all that there is to learn about transmissible diseases in both members of the family by direct and cross-examination. A knowledge of facts need not bias your judgment. Learn also the personal history of the patient. If any cholera infantum followed by a slow recuperation, if rickets with its significant malnutrition, if malarial fever, if the more prominent of the exanthemata, such as scarlatina or diphtheria, if *whooping-cough* with tardy convalescence,—if any of these diseases, I say, come to your knowledge in getting the personal history (and it is the safer to ask about them all) you will be about ready to give an opinion. I say *about ready*, because if you have obtained any facts leading you to recognize an acquired or hereditary diathesis, you will already have observed the movements of the child as it moves over the floor. You will also have already heard about a fall or injury, the knowledge of which

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came second-handed to the mother after she began to observe the very first symptoms of disability. Of course you will investigate the reported injury, and while I am as willing as any one to give a fall all the credit it deserves in the etiology of joint diseases, I must insist on getting facts with regard to falls even.

One among the first things to observe is how the patient walks, whether the spine is carried stiffly, and whether it appears shifted to one or the other side of the pelvis. You will then observe the stooping, whether the spine be held erect, or nearly so, while the thighs and legs, by sharp flexion alone, execute the act. And do you know there are some children who wear one's patience out before you can get them to stoop? You sometimes have to lay them down forcibly. They will surely not remain on the floor, and you can get much information by watching them roll over and get upon their feet again. You will see the child often, while standing, place the hand on one or the other thigh for the "collateral transmission" of the weight. The functions of both hips should be carefully examined, the pelvis should be explored by palpation and percussion as well as the ilio-costal spaces. So much for the general examination of a case for Pott's disease before the stage of deformity. A few details now regarding the different regions.

I. THE CERVICAL AND CERVICO-DORSAL VERTEBRÆ.

One among the earliest symptoms observable in patients who are developing disease in the bodies of the cervical or upper dorsal vertebræ, is a slight torticollis or a modified opisthotonos. The child early shows a disinclination to hold the head erect or to do anything which requires rotation of this member. If any object excites the interest the whole body will turn in getting a view. Often the opisthotonos will be apparent rather than real. The head will be held in this position to prevent the chin falling toward the sternum. Besides it calls other muscles into play in giving support. This can be easily excluded from true torticollis. In the one, passive movements of the head are resisted and are painful, all the muscles coming to the rescue to prevent any motion that may aggrevate the sensitive nerves; in the other, there is no pain unless you make traction on the shortened or contracted

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muscles. The muscle will usually stand out in bold relief, and there is an element of rotation here, not present in the other case.

The facial expression—that of pain and extreme caution in movement—is very significant. The gait is likewise peculiar, the steps being short and cautiously taken, and then there is the compensating backward curve in the dorso-lumbar region which often misleads one into regarding this as the affected locality. This position of the shoulders, shrugged as it were, head seeming to sink down into them, is significant. The little hands can often be seen grasping the chin or the side of the head so as to support it as steadily as possible. These signs and these manœuvres once seen will not be forgotten. There will be a history of pain, usually, in the prone position, the mother will tell how sensitive the head is, will tell how much pain and distress follows the slightest cough. Indeed, occipital neuralgia will almost always be present, if the first or second cervical vertebræ are at all affected, either primarily or secondarily, for the sub-occipital and the great occipital nerves emerge in this region. Mr. Marsh makes a very good point, when he observes that in other regions of the spine, pain, when it is present, is felt either at the affected part or below it, and is very rarely situated at a higher level. Irregular action of the diaphragm will materially assist in making a topographical diagnosis, for the fourth and fifth cervical pairs must necessarily be implicated by reason of the pressure from inflammatory products.

The ordinary temporary deformities of the head and neck from cold sometimes puzzle one in making a differential diagnosis, but in these we have exaggerated deformities with histories of a brief duration. An examination of the tonsils and pharynx is always necessary, and in children it is often very difficult to satisfactorily explore these parts; yet the presence of hard or soft tumors along the post pharyngeal walls can easily be recognized by the finger. If any doubt exists this exploration should not be neglected. An abscess in this region will sometimes produce the most alarming laryngeal spasm.

The symptoms already detailed apply more particularly to the disease as it affects infants and children. In adults we can get better examinations, we can ascertain more definitely

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the location of pain. Furthermore, caries of the cervical spine in adults usually follows some severe traumatism, as a fracture or a subluxation, for instance.

II. THE DORSAL VERTEBRÆ.

When the ostitis is confined to this region, the head symptoms already described are wanting and the pain is referred to parts on a level with or below the vertebræ involved. For instance, in the upper dorsal the intercostal muscles are impaired in function and the respiration is generally abdominal. Lower in the column we have abdominal pains and a fondness, very marked for the prone position. This is sought by day over the mother's knees, over a chair, or on the floor; and by night this position is naturally assumed. To differentiate from the pains due to intestinal disorder, such as the presence of worms in the alimentary canal, or to malarial poisoning, is often difficult, that is, if one do not always examine a case thoroughly. It is well known to the practitioner who lives in malarial localities that "pain in the stomach" is one of the most constant symptoms in children suffering from this poison. I well know that a single examination will not always enable one to eliminate malarial poisoning, and the reason why many cases of dorsal caries are not recognized in their incipiency is not because the attending physician lacks skill, but because he fails to apply that skill. He feels so confident that the case is malarial that he prescribes without a physical examination, without even an inspection, and, with the full assurance that he is correct, he does not examine the case again. He does not know, perhaps, that chronic bone diseases are notably diseases of exacerbations. I care not how great a man may be, how vast his experience may have been, the necessity still exists for a careful examination of all children who have abdominal pains with or without remissions.

The spine will present, instead of a projection backward or a fullness even, rather an incurvation—a lordosis, and this, taken in connection with the duration of the symptoms, the detailed history, the rigidity with which the column is held, the peculiarity in walking and in stooping, will enable one to make at least a provisional diagnosis of vertebral ostitis and give the patient the benefit of precautionary treatment.

One cannot always rely on failing health as a symptom, for

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there are many cases of unmistakable bone disease in fat, hearty-looking children. The plan of making extension with the child lying prone across the examiner's lap, and then reversing this, so often practiced and recommended by some good teachers in orthopædic surgery, does not meet my hearty approval. I resort to it by way of routine, but I must confess I have never been able to extract much information therefrom. As above remarked, the way in which the patient gets up from any decubitus is very significant, and the face will tell where the disease is located.

In the lower dorsal region, tumors in either ilio-costal space often present before any bony deformity can be recognized, and we must bear in mind that a perinephritic abscess will give rise to the same sign. In the former, however, we can generally get a history of chronicity, while in the latter the symptoms will be of short duration and have a sudden onset. In adult life we have strains and rheumatism from which to differentiate, and I do not know of any infallible signs by which one can always be guided. Let the functions of the spine be thoroughly examined, and if possible get a history. Without this latter it is frequently impossible to reach a conclusion at a single visit. In all cases, however, in which a reasonable doubt exists let the patient have treatment, pending your decision, for Pott's disease.

III. THE LUMBAR VERTEBRÆ.

When this region is affected the first sign to which the attention is directed is a lameness or a stiffness in one or the other limb. For a long while the patient will favor one side, at first almost imperceptibly, then there will be remissions apparently, and later, marked flexion of the thigh. The physician when consulted does not get pains at the knee and does not get any tenderness at the hip joint. He gets good flexion and good rotation and good abduction. He rarely thinks to explore the pelvis, and the patient is dismissed as suffering from rheumatism or "growing pains." By and by a tumor presents in the groin or in Scarpa's space, and even then the spinal lesion goes often unrecognized. Femoral hernia is diagnosticated, hip disease with peculiar symptoms is thought of, idiopathic psoas abscess and simple cellulitis. The hand is occasionally passed up the spine, no deformity is felt and caries is excluded.

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Let it be distinctly understood that a soft tumor in the groin or Scarpa's space especially, preceded by lameness extending over one or many weeks, unaccompanied by constitutional disturbance, hectic for instance, unassociated with stiffness at the hip joint,—smoothness of joint-surfaces, free flexion and free abduction,—and without a history of direct injury to groin or of intestinal symptoms, points to disease in the bodies of the last dorsal or some of the lumbar vertebræ. And this is as true of adults as of children. An idiopathic psoïtis is one of the rarest of diseases; an articular ostitis of the hip will extend over many months and will make itself known long before abscess appears. Hernia can be recognized or excluded by an ordinarily careful examination.

To make a differential diagnosis between lumbar caries and perinephritis is frequently attended with considerable difficulty, especially if the perinephritis present an element of chronicity. As a rule, however, perinephritis in children is acute and is primary. In adults it is secondary to a pyonephrosis, and an examination of the urine will assist materially in arriving at a diagnosis. In Pott's disease there is always the element of chronicity. The spine in perinephritis is flexible, and one has no difficulty in thoroughly testing its functions unless, perhaps, the patient be naturally cross and unmanageable. The writer has often directed attention to the points in differential diagnosis in papers on perinephritis, and for a detailed account of the same he would refer the reader to the *American Journal of Obstetrics*, April, 1876, to the *American Journal of the Medical Sciences*, April, 1877, and to the *Chicago Medical Journal*, June, 1880.

The same difficulties arise in differentiating from iliac abscess or perityphlitis. It will be necessary simply to bear in mind these different affections and to remember that they occur with perhaps more frequency than text-books allow. In the *American Journal of the Medical Sciences* for January, 1881, I have reported six cases of perityphlitis as it occurs in children, and the points of resemblance are referred to at length.

It is not scientific, however, to wait for the tumor to appear above the surface. If flexion of the thigh occurs we should make palpation over the iliac region, and the presence of a tumor deep in the iliac fossa can be readily perceived. The

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general symptoms of bone disease will be present here as in other regions.

A word now with reference to the occurrence of spinal caries in subjects suffering from caries in the neighborhood of other joints, more particularly the ankle and the knee joints. Time and again I have overlooked a spinal disease because my attention was devoted to a caries of the ankle or an articular ostitis of the knee. The lesson I have learned is to examine, if possible, the whole body in all cases of knee and ankle joint disease that present, especially if the patient present evidences of greatly impaired nutrition. My friend, Dr. T. E. Satterthwaite, called attention to this coincidence of diseases in his report, to the Therapeutical Society, on Suppurative Disease of the Ankle in Children and Young Adults, published in the *Medical Journal*, August 21, 1880.

In conclusion, let me urge upon the profession the possibility of making a diagnosis of vertebral caries before the stage of deformity is reached, the duty of making the diagnosis, —a duty now all but imperative,—and the facility with which it can be done, irrespective of the region affected, if the physician cultivate a habit of submitting every case of disease in children, wherein the least element of chronicity enters, to a thorough physical examination.

XVI.—CASE OF SUBCUTANEOUS SECTION OF THE FEMUR ABOVE THE TROCHANTER MAJOR.

By A. VAN DERVEER, M. D., Albany, N. Y.

Believing that cases among which we would class the following are not so very numerous, I have thought best to report this one to the Society :—

Miss P——, aged 19, possessing a bright, happy expression of countenance and a very cheerful disposition, through the kindness of Dr. S. Peters, of Cohoes, came under my observation, first in September 1881, giving the following history :—

At the age of two years she fell down stairs and shortly afterward she was noticed to turn slightly in walking and soon began to complain of pain in the knee. She was treated for rheumatism.

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Three years after, the limb began to contract, when an extension splint was applied, but on the removal of the splint in a short time she fell again, injuring the same limb. After this the joint underwent severe inflammatory changes, suppuration taking place and finally anchylosis resulting.

At the time she entered the Albany Hospital, October 5, 1881, the left leg was anchylosed at the hip, it was partially flexed on the body and adducted, the knee being thrown in front of the right knee. She walked by the aid of a raised shoe and cane, turning the whole pelvis, there being extreme mobility as well as a curvature anteriorly of the spine in the lumbar region.

When lying in bed the leg was flexed and the curvature in the lumbar region was marked.

For the relief of the deformity which made sitting and walking so difficult, it was decided to do a subcutaneous section of the femur. October 10th, the patient having been put under ether by Dr. Mosher, and assisted by Drs. Ward, Snow, S. Peters, Hailes, VanderPoel, Jr., and house staff, an incision was made a little over the top of the great trochanter and the muscles divided down to the neck of the bone by Shrady's trocar with saw. So far the operation was subcutaneous, but, on attempting to use the saw, it broke off in the wound giving us for the time great embarrassment and necessitating its enlargement. This was done antiseptically under the spray, the broken saw removed with some difficulty, and the operation proceeded with. It was found necessary after the section of the bone which was made just above the trochanter major to perform tenotomy on the tendons of the adductor muscles. Extension was then applied to the limb by means of the stocking and bandage with about fifteen pounds weight (7 kilos.) and kept up for about six weeks.

A small abscess formed at the point of the tenotomy, but the wound over the trochanter healed kindly. There was considerable oscillation of the temperature, it occasionally going quite high. This gradually improved, and at the end of about seven weeks she was allowed to sit up, and soon after attempted to use the crutches.

The condition at this time is about as follows:—The limb is now nearly straight with the spine when lying on her back, the shortening being only about 1¼ inches (31 mm.)

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January 25th, 1882, 117 days after the operation, she writes:—"In lying on my back and with the limb straight, the knee is raised somewhat, but not uncomfortably so; on either side I lie naturally. The position while sitting is upright, and a slight bending forward is possible as I bear more weight on that foot. I find my back is not so straight as was at first supposed, not, however, as before, deformed. With the cane I walk easily, not being obliged to turn as those with a stiff joint; without it I do not walk well, but bend towards that side. I do not think the motion increases at the hip-joint. The foot cannot be reached as the other is, but only by bringing it backward. This is the only difference I notice in the use of the limbs." The patient's parents write that the improvement is far beyond anything they had expected. Later, she reports as being able to walk with very little assistance from a cane, and to bend the hip joint so as to put on her stocking with little difficulty, her great comfort being her ability to walk upon a slippery sidewalk, knowing she has no iron shoe to slip and give her a fall.

Discussion.

Dr. S. B. WARD, of Albany: Mr. President—Cases of the class of this which Dr. Vanderveer has just reported are among the most interesting, just at the present time, which come under the notice of the operating surgeon. Among the laity and also to a certain extent among our professional brethren who do not themselves do any surgery, the greatest interest appears to attach to amputations and resections. Now they are not so interesting to us, for the reason that the rules to be followed are so well established that no one can go astray. Again, the ultimate effect of the operation is the loss of a limb and impairment of the usefulness of the individual. In these cases, on the other hand, there is great room for the exercise of personal skill and ingenuity, and, with modern instruments and modern knowlege of pathology, we dare venture what no one dared even a few years back. And, again, these cases have been, to a certain extent, an opprobrium to surgery, which, fortunately, will not a few years hence be the case.

The lesson which we can fairly learn is that, in a really difficult case to advise about, when an unfortunate unavoidable accident converts what was hoped would be a suboutaneous operation into a suppurating wound, the result is entirely satisfac tory to the patient, to her friends and to the surgeon. As this agrees with the results obtained by other surgeons, we may fairly, in similar cases in the future, promise sufficient improvement to more than counterbalance any concomitant risks.

Dr. SAMUEL PETERS, of Cohoes: Mr. President—I can corroborate what Dr. Vanderveer and Dr. Ward have said, and I wish to corroborate all that has been said, for it was a beautiful success. The patient was seen by Dr. Miner of Buffalo, Dr. Sayre of New York and also Dr. Post of New York, who thought he should prefer

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Adams' operation, which was Dr. Vanderveer's decision. I am confident that the joint will become almost as useful as that upon the sound limb.

XVII. The Significance of Pain Referred to the Ear.

By D. B. St. John Roosa, M. D., LL.D., Surgeon to the Manhattan Eye and Ear Hospital, New York.

It is notoriously difficult to estimate accurately a subjective symptom, but pain takes a high place in the important testimony given by the patient himself. It brings with it so many objective signs in the expression of the face, and the gestures, and in the play of emotions, that we all attach much importance to it as a diagnostic symptom. When we have made all due allowance for the nervous disposition which exaggerates the least pain until is described as unbearable; when we have noted the delicacy or pusillanimity of temperament which tolerates no discomfort, we still find in pain an important indication of the true state of the organ supposed to be diseased. The symptom of pain in the ear is no exception to this rule. We may find in it, perhaps, much that is significent and suggestive. If the Society will grant me their indulgence for treating of a somewhat commonplace subject, I will venture to formulate the suggestions which are made by the discovery of the existence of pain in the ear. It is the symptom commonly known as earache.

1. *Foreign Bodies in the External Auditory Canal.*—The entrance into the external auditory canal of a living animal, such as an earwig, or the generation of a maggot in the same part may, and generally does, cause severe pain. The diagnosis of the cause in this instance is easy. Ocular inspection will determine it in a few seconds. The means of relief are simple. Syringing with warm water, or filling the canal with fluid, will readily remove the insect. As to the maggot, it will be necessary to kill the grub by the use of such an agent as Labarraque's solution, or by vapor of chloroform, before it can be removed by syringing.

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Inanimate foreign bodies, which are generally placed in the ear by children, or irresponsible adults, do not usually cause pain, unless they have been pushed down into the canal, so as to press upon its sensitive integument or upon that of the drumhead. Nor is there any danger unless this has occurred. This is a hint to us to avoid haste and severe means in removing such an offender.

Impacted wax, in a few cases, causes severe pain in the ear. The diagnosis here is also perfectly easy, and the means of relief ample. In the majority of cases, inspissated cerumen, while a foreign body, may cause tinnitus and impairment of hearing, but does not produce pain. In the cases which I have seen where pain occurred, there has been an inflammation of the integument of the canal, so that the wax has been glued, as it were, to it; or it has pressed upon the drumhead. This pressure upon the membrana tympani, from a plug of hardened material, may not occur until the wax has remained in the canal for months. I have long thought that the cause of impacted cerumen is to be found in an inflammation of the canal, and that the inflammation, if such there be, causes a swelling and adhesion of the epidermis, perhaps of the integument itself, to the cartilage or periosteum of the canal. It is in these cases where the inflammatory origin is decided, that I have seen pain particularly prominent as a symptom.

2. *Furuncles and Diffuse Inflammation of the External Auditory Canal.*—The pain from furuncles or from diffuse inflammation, is very often extremely severe. But it may usually be distinguished from that caused by inflammation of the middle ear, even without ocular inspection, although I am far from advising any one to thus venture a diagnosis.

Unfortunately, pain from an inflammation of the canal is not so easy of immediate relief as is pain from the more deeply seated and dangerous lesion. An inflammation of the canal may extend to the auricle and to the superficial tissues of the mastoid process. An inflammation of the connective tissue and perichondrium of the auricle, is extremely painful, and I know of no adequate means for its immediate relief. It is fortunate that it is rare.

But even when this occurs, the pain from an inflammation of the canal is not to be compared with that from a true periostitis of the mastoid process, or that from an inflammation of

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the little tympanic cavity. In rare cases it is probable that the inflammation of the canal becomes periostitis by direct extension, and in such instances the pain will be very severe, but the means of relief are sufficient. An incision which divides the inflamed periosteum, will give it in a few moments. A periostitis of the canal cannot be distinguished by the character of the pain from a periostitis arising from an inflammation of the middle ear. The extension from this part is as dangerous as the extension from the tympanic cavity, and, as I have said, the pain from furuncles or diffuse inflammation of the canal is not so easily relieved as the same symptom arising in the course of the more serious inflammation of the tympanic cavity, Eustachian tube, and the mastoid cells.

The probable consequences of an inflammation of the canal, either diffuse or circumscribed, are not serious; and we may not be troubled as to the future of the patient's hearing, even though we are not able to promptly relieve the pain. The means upon which I rely for the *mitigation* of the pain from furuncular or diffuse inflammation of the canal are, 1, the warm douche, and the use of steam; 2, poultices applied behind and in front of the ear, and *in* the meatus; 3, incision of the inflamed tissues; 4, the administration of some preparation of opium.

Large poultices enveloping the auricle, as has been long since shown, are apt to set up chondritis, a tedious disease of the auricle, and they may also cause granulations to rise in the auditory canal. Some times the warm water acts like a charm, to quiet all the pain from this form of inflammation. It should be used by means of a fountain syringe, or Fayette Taylor's douche, or any other syphon arrangement which may be at hand. The ordinary syringe will never be of any value in the application of the douches. The stream must be continued without interruption for a long time, in order to mitigate pain. When the warm douche fails, poultices, applied as I have stated, will sometimes accomplish very much; and when all these fail, a free incision through the swollen tissues down to the bone in the osseous canal, and well into the cartilage in the cartilaginous, will cut off the severity of the attack. But in many of the tedious cases all of these agencies but mitigate the symptoms until the proper conditions of life replace the improper ones under which this disease originated,

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and tonics, change of air, and time have wrought a cure unmarked by relapses. It is an interesting clinical fact that leeches are usually of no avail whatever in furuncles of the auditory canal, and of very limited value in diffuse inflammation, important as their use is in subduing the pain of severe inflammation of the middle ear.

I have carefully studied all that is claimed for sulphide of calcium in subduing pain in this part of the ear, and I have occasionally administered it to prevent frequent relapse of furuncular inflammation, but as yet I see no reason to change my opinion that the exhibition of such drugs as a means of relief for pain caused by local swelling and tension in an inacessible part, inacessible as to the relief of tension, is simply a *renaissance* of the exploded tenets of one of the sects in medicine.

Pain in the ear from external inflammation is much more rare than from a morbid process in the middle ear. From the character of the pain alone it would be very difficult to make a diagnosis, and yet it may be said, in general terms, that pain from inflammation of the middle ear may be distinguished from that from boils or from that *rara avis*, otalgia, by its general characteristics of intensity. The pain from the serious disease of the middle ear is often agonizing and overwhelming, continuing without interruptions of composure, while that from furuncles and otalgia is comparatively bearable.

3. *Disease of the Middle Ear, that is to say, of the Tympanic Cavity, Eustachian Tube, and Mastoid Process is a prolific cause of Pain.*—This pain, when intense, is a serious symptom. The well-being, often the life, of the patient, may be involved in its proper interpretation. If it be intense and arise from pressure in the tympanic cavity or the mastoid cells, from tension of the infiltrated periosteum, or from pressure by swelling of the Eustachian tube, no drugs, not even doses of opium, or its preparations, much less any of the recently recommended medicines, such as sulphide of calcium and pulsatilla, will be of any avail at all, until nature or mechanical means, such as leeches and the knife, and inflation of the stopped-up chambers have evacuated the pus or mucus, disgorged over-filled blood-vessels, or divided the tensely-stretched membranes.

Slight pain is readily relieved by the warm douche and by poultices. Those who believe in the mysterious virtues of

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drugs in preventing maturation may add them to the mechanical means in these cases. But in the mild forms of middle-ear inflammation they are unnecessary, and in the severe ones wholly useless. Confinement of the patient to a warm room, promotion of the moisture of the skin, perfect tranquillity of the body, will be found necessary adjuvants in the treatment of pain from disease of the middle ear, while these things will accomplish very little, if anything, in relieving that from boils.

The means for determining the origin of pain in the ear are ample, and yet, as we all know, perhaps, the conclusion is often hastily reached that the disease from which it arises is one of the canal and not of the middle ear. A serious disease is thus mistaken for one which is unimportant, by comparison. It may be, in the opinion of your speaker, taken almost for granted that severe earache, in ninety out of every one hundred cases, is caused by inflammation of the middle ear. I would adopt means for its relief as follows: 1, the warm douche; 2, leeches. These will scarcely ever fail in cases seen within one or two hours of the beginning of the pain. Sometimes, however, nature anticipates any ordinary surgical assistance and relieves the case by the bursting of the enlarged blood-vessels through the membrana tympani within an hour of the beginning of the attack. [Otitis media hæmorrhagica.]

But even if the pain has existed for days, the proper action of leeches will cut it off, often before the leeches have dropped from the tragus or the mastoid, while the warm douche will complete the cure.

I have been speaking of severe pain—of pain which prevents sleep even though powerful anodynes are used—pain which causes the strongest man to groan with agony or writhe with restlessness in this unintermittent disease. The pain from periostitis of the mastoid is also relieved as readily as that of tension of the tympanic cavity, if seen early, by leeches, by poultices; and if seen late, by division of the tissues down to the bone.

There is much disease of the middle ear, active though it may be, which is not characterized by great pain, and in which the beneficent power of time and nature will accomplish a great deal. The wise observer will carefully discriminate between severe cases and those which need mild treatment. But that form of disease characterized by the pain which I have

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endeavored to describe, will sometimes, nay often, work destruction of the organ of hearing, and even cause the loss of life, if not relieved at once. When it occurs it cannot be trifled with, and, as yet, no means have displaced those known as local antiphlogistics.

4. *Otalgia.*—Pain in the ear of a severe type, and lasting but for a second at a time, sometimes occurs in the course of chronic non-suppurative disease of the middle ear. The symptom is not an important one. Such pains do not interfere with the usual health of the patients unless they are anæmic or hysterical. What may be called typical otalgia, that is, pain in the ear, without apparent lesion, rarely occurs. When it does, it may depend upon carious teeth, or upon rheumatism or syphilis.

In closing this essay upon the significance of pain in the ear, I venture to state, whatever æsthetics may owe to Mr. Oscar Wilde, humanity remains under great obligation to his father, the great Irish baronet, who, some thirty-five years ago, first plainly drew the line between the extremely rare affections of the ear, which may be denominated nervous, and those which are of an inflammatory character. He plainly indicated to us the importance of leeches, and of division of the periosteum for relief of serious pain in the ear.

The debt which we owe him was increased by that due to Hermann Schwartze, of Halle, for having revived the operation of paracentesis of the membrana tympani in cases of over-distention of the tympanic cavity. These means remain, as yet, unsupplanted for the relief of the symptom which is generally caused by what may be called mechanical influences. He who discards them in the proper cases, does so at the peril of the integrity of the organ of hearing, perhaps even to the life of his patient; true though it be, that one may escape from even such peril after weeks of unnecessary suffering, with neither damage to his hearing nor loss of life.

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XVIII.—THE MALIGNITY OF SYPHILIS, WITH AN ANALYSIS OF FOUR HUNDRED AND FIFTY CASES OF THE DISEASE.

By L. DUNCAN BULKLEY, A. M., M. D., of New York, attending Physician for Skin and Venereal Diseases at the New York Hospital, late Physician to the Skin Department, Demilt Dispensary, New York, etc.

Syphilis is in many respects the most important disease which can affect the human frame, and the study of its ultimate relations to pathology, as affecting life and health is as yet in its infancy, while its real bearing upon race degeneration and death will not be known for a long time to come.

Beginning often as a most insignificant abrasion, which may not possess sufficiently definite characteristics to establish a correct diagnosis with certainty, the disease may in turn attack each and every organ of the body, cause great devastation of tissue and disturbance of function even to the destruction of life; it may also perpetuate its effects on children and children's children. Not only this, but being capable of multiplying the poison within the system, a single case can for a long period become a source of infection, whence many may acquire the disease, each in turn to pass through the same slow stages of development and destruction, and possibly or even probably, of further propagation of the disease.

Syphilis is no longer to be looked upon as exclusively a venereal affection; multitudes of individuals suffer from it who are wholly innocent of sexual transgression, and in addition to the many who receive it in lawful coitus from those who have been unfaithful, the number of recorded instances of extra genital chancres has multiplied, of late years, beyond the conception of one who has not closely watched the matter. I have myself seen chancres upon the arms, breast, cheek, chin, finger, lip, thigh, tongue and tonsil, and others have observed them on almost every part of the integument.

Among the various methods by which the disease has been accidentally acquired may be mentioned the following: the processes of vaccination and circumcision, in very rare instances, also those of tattooing and skin grafting; it has also been communicated by a bite, and in the act of kissing, likewise during nursing; physicians, nurses and midwives have

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also acquired it in the discharge of their duties, and instances have occurred where midwives have conveyed the disease to a number of persons in succession while attending upon confinements. The means of transferring the poison from one individual to others are almost as numerous as the objects of common life; it has been passed from one to another on the glass-blower's pipe, also by means of smoking pipes and segars; lead pencils, drinking and eating utensils, toys, tooth-brushes and razors, have all been reported as the agents by means of which individuals have been infected, and various surgical instruments have been credited with conveying the poison.

This, then, being a disease to which all are liable to a greater or less degree, and for which many thousands are treated annually in New York city alone, it becomes a matter of interest to all to fully appreciate its pathological tendencies, to recognize readily its symptoms in each and every stage, and to understand rightly the treatment required, both in kind, degree and duration. The first of these topics alone will engage our attention at the present writing, namely, the pathological tendencies of syphilis, its benign and malignant aspects.

When syphilis was first recognized as a disease, between three and four hundred years ago, and before its treatment was at all established, fearful ravages were ascribed to it, the more so as the chancroidal ulceration was also confounded with that produced by syphilis.

With the further study of the subject and observation of cases, and upon the discontinuance of salivation, and the adoption of tonic methods of treatment, syphilis has become more manageable and less terrifying, until it has even been spoken of by some as a benign disease—at least in certain cases. This fact of its benignity in a certain proportion of instances has long been stated in a modified degree, and it has been intimated that the difference was in the methods of treatment employed; and latterly it has been rightly pointed out that, in a certain measure the disease itself appears, at times and in some cases, to have a tendency to run a favorable course, even without treatment.

Especial attention was called to this in an article by Dr. C. L. Dana* read before the New York County Medical Society, January 10, 1881, based on certain observations made with re-

* The Medical Record, New York, February 5, 1881.

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gard to sailors presenting themselves for general treatment in the U. S. Marine Hospital Service. Under the title of "On the Benignity of Syphilis," he attempted to show that the sailor who, from his exposure, neglect and bad habits, would be likely to be most severely affected by subsequent manifestations, was, according to his experience, unusually exempt from any of the serious ravages of syphilis, notwithstanding the extraordinary frequency of past history of venereal sores obtained among this class.*

His conclusions were :—

"First—That syphilis as a rule runs a very mild course indeed among American seamen.

"Second—That it runs this course, often without regular treatment, and almost always in spite of irregnlar living and unhygienic surroundings."

He added that "these two conclusions tend to confirm the views of those who believe—

(a). That syphilis is curable, and furthermore,

(b). That it very often has a tendency to spontaneous cure ; and

(c). That this present benignity of the syphilitic poison is due in part to treatment, in part to a gradual change, either in the character of the poison itself, or in the organism it feeds on, or both."

It is not the purpose of the present paper to review this article, which is based on insufficient data, and apparently too slight personal experience with the disease to be of authoritative weight ; but it is mentioned in order to exhibit this side of the question as it has already been presented. The subject of "The benign aspect of syphilis" was also brought before this Society at its last annual meeting by Dr. G. H. Fox, and excited considerable debate. At this time, as also on the occasion of the reading of Dr. Dana's paper, the present writer protested strongly against regarding syphilis as a benign disease in any sense of the word ; while acknowledging that the lesions were generally amenable to carefully directed and sufficiently prolonged treatment, and while agreeing that cases

* Exception can well be taken to the conclusions drawn in this paper. The material analyzed was not such as would furnish exact data, and in a single inspection and examination of such a class as sailors, would not be very likely to develop facts in regard to the real pathological relations of such a disease as syphilis.

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varied greatly in their severity, some being very mild, attention was called to the later results of the syphilitic poison often tending to disorganization of tissue; comment was also made as to the element of uncertainty about the results of syphilitic infection, which placed the disease among the most dreadful known, since cases which at one time appear to be mild might, in later years, lead to the involvement of important organs and to serious consequences. Other points were also discussed which cannot be touched upon here.

It is not a little remarkable that at the preceding meeting of this Society, two years ago, Dr. F. R. Sturgis read a paper upon the so-called "galloping syphilis," in which he presented the severe and malignant form of the disease. In this article Dr. Sturgis states that he is not induced to attribute any influences to a supposed potency of the virus, but rather to a condition of the soil in which it is deposited, and that this, in his opinion, accounts for the varying intensity of syphilis in certain cases.

The causes leading to a depraved tendency of syphilis are all such as tend to lower vitality and to diminish the power of resistance to disease; among these may be mentioned nervous exhaustion and mental depression, extreme anæmia, abuse of alcoholics, bad hygienic surroundings, that undefined, but still practically recognized habit of body known as strumous or scrofulous, advanced age, frequent child-bearing, the intercurrence of other disease, and many factors which cannot be here detailed.

Many of the accounts which have appeared in regard to the more severely destructive and dangerous manifestations of syphilis have related to cases observed among those in the lowest walks of life, especially such as are met with in venereal wards in the free hospitals in this and other countries.

It has occurred to me that it would not be uninteresting to go over the material which has come under my observation in the higher and middle classes of society, in order to observe to what degree the more severe manifestations of disease occur in them. The present paper, therefore, is based on observations made in private practice and in my clinic at the Out-Patient Department of the New York Hospital; the patients presenting themselves at this latter institution belong very largely to the better classes,—clerks, artisans, and those who have been

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reduced from more affluent circumstances, while there are few of the very poor, on account of the small fee which is charged for medical services and medicines. The accompanying tables give a synopsis of four hundred and fifty cases of syphilis, one hundred and fifty from private practice, and three hundred from public, all being cases which have been carefully observed and noted at the time, the hospital cases being all treated within the last four or five years. These tables exhibit various points, some of which will now be dwelt upon.

First, in regard to the frequency with which the manifestations of syphilis have presented themselves.

The three hundred public cases of syphilis appeared among 1,074 miscellaneous skin cases, giving a percentage of nearly twenty-eight of the latter in the whole number. The 150 cases in private practice occurred in about 2,500 miscellaneous cases of skin disease and syphilis, giving a proportion of only six-tenths per cent. The very great difference in the relative frequency of syphilis in the two classes of practice is accounted for by the fact that the public clinic included venereal diseases, while among private patients syphilis appears mainly on account of the skin lesions.

In regard to sex, there were 92 males in private practice to 58 females; in public practice there were 213 males to 87 females—a total of 305 males to 145 females. The great difference in numbers as regards sex may be partly explained by the comparative infrequency with which females recognize the primary sore, owing to the slight inconvenience usually resulting therefrom, and the fact, which is often observed, that females not infrequently either escape the earlier cutaneous manifestations of the disease or fail to notice them; the former has seemed to be rather the real reason, because constantly it is observed in intelligent women with lesions that they give absolutely no history of preceding general cutaneous manifestations.

In regard to the ages of the patients, the vast majority of those affected were between the ages of 25 and 35, as shown in the accompanying tables; the oldest patient in private practice was a gentleman of 67 with newly acquired disease, the youngest, a few days old, had inherited syphilis; in public practice, the oldest was 65 years old, the youngest 5 weeks.

In these 450 cases there was evidence of primary lesion in 99

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cases, either as a decided chancre or as an induration of a preceding syphilitic sore, and in but 71 additional cases was there a satisfactory history of chancre on the genital region. A total of only 170 in the entire 450. In private cases, a chancre or remaining induration was observed in but 24 cases, while in 49 a fair history could be obtained, dating often as far as twenty years back, a total of only 73 cases in the whole 150, or only a little less than one-half of all the cases in which there was evidence or even history of chancre, and that among intelligent private patients. Among the 300 public cases there were 46 instances where the chancre was the sole lesion observed, and these cases may therefore be excluded from any consideration in regard to the subsequent manifestation of the disease, inasmuch as this class of patients are always uncertain in attendance, and some of the cases were observed comparatively recently. This leaves only 18 out of the remaining 253 public cases in which the chancre or its remaining induration was observed in connection with the subsequent lesion, while in but 28 other cases was a satisfactory history of chancre recorded.

These figures show how little the statements of patients in regard to preceding sores on the genitals can be relied upon as an element in establishing the syphilitic nature of a subsequent lesion. Excluding the 46 cases of chancre alone occurring in public practice, and three cases in private practice where this was the only lesion recorded, we have, in the remaining 401 cases of syphilis, only 93 instances (24 private and 69 public) where the chancre or its induration was observed, and 102 other cases (39 private and 63 public) where a reasonably satisfactory history was obtained of a true infecting chancre.

In regard now to the subsequent lesions of syphilis as recorded in these tables: a macular eruption was observed in 51 cases (12 private and 39 public); a papular eruption in 80 (25 private, 55 public); a squamous eruption in 24 (14 in private, 10 public); a tubercular eruption in 121 cases (64 private, 57 public); and gummy deposits in 49 cases (7 private, 42 public); mucous patches were recorded as an important element in 86 cases (29 private, 57 public); adenopathy was especially recorded in 86 cases (34 private, 52 public.)

Much more important than the skin lesions thus mentioned

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were the other manifestations of the disease recorded in the notes whence these tables were drawn. Neuralgia was noted as a special symptom in 19 private cases, sciatica apparently due to syphilis in 5 cases (3 private, 2 public). Syphilitic deafness was once recorded; headaches caused by syphilis, were noted in 14 cases in private and 6 cases in public practice; ataxic symptoms, apparently of syphilitic origin, were observed in two cases. In one very striking case, dementia was caused by the disease, which yielded very rapidly and perfectly to anti-syphilitic treatment; in another case hemiplegia occurred in a young subject with severe syphilis, and yielded very rapidly and perfectly to treatment for the disease. In one case I observed very marked atrophy of the hand with anæsthesia, which occurred as a consequence of a gummy tumor on the ulnar nerve. Rheumatism, or rather indistinct deep pain, was recorded as a special feature in 30 private cases, nodes were frequently observed on the tibiæ, the ribs, sternum, ulna, metacarpal bones, those of the cranium, etc.; well marked dactylitis occurred once; bursitis was recorded in 5 cases. There were 23 cases of eye lesions due to syphilis, mostly iritis; in one patient syphilitic choroiditis destroyed the vision in one eye and damaged the other; in this case the initial lesion had probably existed twenty years previously, and the only corroborative syphilitic symptom was a very characteristic palmar lesion occuring two or three years previously. In two private cases very severe double ectropion, still awaiting surgical relief, was occasioned by very extensive and deep syphilitic ulceration of the face; in one of these cases a latent epilepsy was very greatly aggravated when the syphilis was neglected. In 29 cases (18 private, 11 public) alopecia formed a striking feature; in one of those in private practice, a gentleman who was sent to me solely for the treatment of the alopecia, whose true nature was not suspected, very severe general syphilis followed, exhibiting dangerous brain symptoms at one period.

Thirteen patients in private practice had miscarriages as a marked symptom of syphilis, and in six more sterility was attributed to this cause. There were six deaths (5 private 1 public) recorded as due to syphilis; of these, five (4 private, 1 public) had hereditary syphilis out of 19 thus affected.

In addition to this mere statement of the cutaneous and

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other lesions, mention must be made of the destructive tendency which was observed in very many cases. At the present writing I cannot give exact figures in regard to this feature, as the data were not transferred from the notes to the tables; but much time could be occupied in detailing the ravages which the disease has made upon exposed parts. I recall readily between half a dozen and a dozen cases in private practice where serious scarring and deformity has taken place upon the nose before the disease was recognized and checked; in several of these the septum was entirely removed, and in one there was ulceration, also, through the bridge, while the number in which serious lesions appeared upon the face and exposed parts cannot now be stated, but was great. The same is true in regard to the public cases. A number of instances of extensive gummy infiltration, and destructive ulceration of the penis were observed, while those of syphilitic ulceration of the legs, often quite incapacitating for work, was very large among the poor.

The subject is by no means exhausted, and much more of interest and importance could be obtained by further study and analysis of the notes of the cases which are presented in these tables. But space forbids this at present. The object of this study was to introduce and develop the subject of the effects of constitutional syphilis, and to call attention to the serious character of the disease, or rather its serious tendencies, under circumstances favorable thereto.

No attempt has here been made to enter into the literature of the subject, or even to refer to the observations of others; the desire was to present the matter as it appeared practically to one who was in constant contact with the disease, often many times daily, and to bring facts from recorded observations, not to prove any one point, but to picture the disease in its true characteristics. One has but to look at the vast bibliography rapidly accumulating in regard to the effect of syphilis on various portions of the body, and the books and monographs relating to disease of the various organs occasioned thereby, which are multiplying rapidly, to be convinced that in syphilis we have not only not a benign disease, but one whose ultimate relations to pathology as affecting the life, health and happiness of the race is hardly second to any but phthisis, and it is even questionable how far previous syphilitic race degener-

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ation has to do with the production of what is known as scrofula and tuberculosis. To what degree the term malignant is applicable to syphilis in the sense in which it is used in medicine, as for instance in connection with cancer, it is difficult to say; the term malignity of syphilis was introduced in the title to emphasize its ultimate harmful or even destructive tendencies under suitable circumstances, and in contradistinction to the expression, "the benignity of syphilis," which has been employed by others.

Absolutely no conclusions in regard to the death tendencies of the disease can be drawn from any mortality tables yet published. In its more commonly recognized manifestations, it is not fatal, but as an agent tending to induce changes in many organs which may end life with other symptoms, its true influence, as stated in the opening remarks, will not be known for a long time to come.

In conclusion, the following may be stated as the points worthy of consideration in connection with the present subject:

1. Syphilis is a constitutional infectious disease, of which the first outward manifestation is the chancre, initial lesion, or initial sclerosis, at the site of entrance of the virus.

2. While this primary lesion commonly presents points by which it may be recognized, in other instances it is very difficult to speak with positiveness from the local lesion alone, and therefore cases presenting only local sores must as a rule be excluded from any consideration of syphilis, as regards the pathological tendencies of the disease.

3. In a certain proportion of cases constitutional syphilis is a mild affection even as the infectious diseases occur with varying severity under different conditions.

4. The causes of the difference observed in certain cases of syphilis are as yet unknown; individual constitution, surrounding circumstances, the dosage of the virus received, proper treatment, and possibly partial protection through hereditary influence of the disease, are elements of importance in every case.

5. No definite prognosis can be made from the character of the initial lesion of syphilis, as to the progress of the disease if left untreated; cases which at the beginning seemed insignificant, have in later years proved most serious, while in many instances of late lesions of syphilis no satisfactory history at all can be obtained in regard to the initial sore, it having been so slight or so concealed as to escape notice.

6. In view of the very severe and extensive manner in which syphilis may at some time during its course affect any or all of the tissues of the body, and the destructive pathological tendencies of the disease under favorable conditions, syphilis cannot properly be spoken of as a benign disease, although certain cases may under suitable circumstances run a very mild course.

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TABLE 1—PRIVATE CASES.

No	NAME	AGE.	SEX.	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
1	Mrs. A. G.	31	F		squamous.	No miscarriages. Children healthy. Rheumatism, neuralgia, adenopathy.
2	Mrs. B. E.	29	F	of breast, July, 1880.	squamous.	Adenopathy, sore throat.
3	B. A.	40	M		tubercular, nose.	Wife has uterine difficulty. No history of chancre.
4	Mrs. B. P.	25	F		papular—6 mos.	Node on forehead 5 months ago. Sciatica, adenopathy, ulceration of tonsils. Husband had erysipelas—child eczema. No miscarriages.
5	Mrs. D. R.	38	F		tubercular, face—3 yrs.	No miscarriages. Had "canker" sores. Had measles (?) 20 years ago.
6	Miss E. H.	32	F	of mouth, Aug. 1879; induration present.	papulo-pustular.	From kissing. Excavation of right tonsil. Alopecia, adenopathy, iritis, sternal tenderness. Great subsequent destruction from general ulceration. Double ectropion.
7	E. C.	26	M	recent; induration present.	papular.	
8	Mrs. A. J.	30	F		tubercular, left leg.	Husband, bubo 8 years ago. First child still-born; no eruption. Second child died at 15½ months, of bowel trouble. Twins at 7 mos., in July, (5 mos. ago,) lived only few hours. Had iritis. Velum and soft palate destroyed. Rheumatism.
9	B. W.	39	M	in 1864 (?)	pustular, left leg.	Neuralgia, iritis.
10	B. A.	36	M	12 years ago (?)	tubercular, nose and lips.	Perforation of septum nasi. Occasional headache over center of head.
11	B. A.	32	M	10 yrs. ago.	papular, chiefly arms and legs.	Adenopathy.
12	Mrs. B.	24	F	5 mos. ago, had sores in vagina.	pustular.	Miscarriage 8 months ago. Rheumatism.
13	B. W.	40	M	8 or 9 yrs. ago (?)	tubercular.	Father of No. 14. Nasal catarrh (?) sore throat, sciatica, pain in back.
14	B. C.	6 mo.	M		bullous.	Son of No. 13. Hereditary syphilis. Has sore mouth. Never nursed from bottle. Loss of nails. Child died when 1 yr. old.
15	Mrs. B. S.	22	F		papular, hands & arms—mucous patches inside left cheek.	Eruption appeared 3 mos. after marriage and when pregnant. Hair falls out.
16	Mrs. B. G.	25	F		tubercular, right fore arm.	Has had five or six miscarriages occasioned by fright, &c. No history of syphilis. Had sore on back of head 12 years ago. Four years ago eruption on shoulder similar to that existing at present.
17	B. W.	21	M	Oct. 1875, 14 mos. ago; induration present.	mucous patches, back of throat, ulcer on tongue.	Tenderness of shins. Adenopathy.
18	Mrs. B. M.	35	F		gummy ulcer on right knee.	Married 15 years ago. Husband lived 1 yr; was shot during war. Had miscarriage at 3 mos. Had eruption on knee before death of husband, but now free some time.
19	B. O.	65	M		macular, general.	Husband of No. 20. Adenitis. No history of infection.
20	Mrs. B. O.	60	F		macular, general.	Wife of No. 19. No history of infection. Rheumatism, sore throat, choroiditis, adenitis.

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TABLE 1—PRIVATE CASES.

No	NAME	AGE.	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
21	B. F.	43	M	in 1864.	mucous patches on end of tongue.	Chancre, followed by macular eruption in 2 mos. After that no trouble until 10 yrs. subsequent (4 yrs. ago), then mucous patches on tongue. Wife no miscarriages.
22	B.	5 wks	F		bullous.	Hereditary syphilis. Death.
23	Mrs. B. S.	43	F		papular, general	Husband died of consumption. Was separated from him 5 yrs. before death. No history of infection. Adenopathy. No miscarriages. Headache. Had sore lips, followed by swelling of submaxillary gland previous to eruption.
24	B. J.	56	M		squamous, general—mucous patches on scrotum.	Rheumatism. Dimness of vision. Adenopathy. Headache. Onychia.
25	Mrs. C.	32	F		bullous.	Is three months pregnant. No history of syphilis.
26	C. A.	33	M	upper lip.	tubercular, head, arms and legs.	No rheumatism. No alopecia. Sore on lip, followed by sore throat. Node on right fibula.
27	C. T.	50	M		squamous, on the palms.	
28	Mrs. C. H.	35	F	on breast, 2 yrs. ago.	papular, nose.	Three miscarriages. Has had sore throat.
29	C.	50	M		tubercular, left leg.	Clear history of syphilis.
30	Mrs. C. J.	58	F		papular, general.	Throat and tongue sore. No history of infection.
31	Miss D.	19?	F		papular.	Mother of No. 62. One premature birth. Rheumatism. Alopecia. Throat ulcerated.
32	D. L.	54	M	in 1856, (16 yrs. ago.)	tubercular, left side of forehead and forearms.	
33	D. T.	54	M	22 yrs. ago (?)	squamous, palmar.	
34	Mrs. D. F.	33	F		squamous, palmar.	No miscarriages. Alopecia. Rheumatism. No headache. Node on right tibia.
35	D. L.	39	M	in 1865 (?) 6 yrs. ago.	tubercular, forehead.	No rheumatism. No sore throat.
36	D. W.	37	M		tubercular, lower lip and back of neck—mucous patches at edge of lip.	Wife no miscarriages and no children. Married 12 years.
37	E. J.	31	M		tubercular, legs, arms and forehead.	No history of infection.
38	Miss E. J.	22	F		papular, right cheek—mucous patches, side of tongue.	One miscarriage. Sternal tenderness. Ulceration of fauces.
39	E	40	M		tubercular, left knee and hip.	No sore throat. No rheumatism. Headache.
40	F. T.	42	M	4 yrs. ago.	tubercular, arms and legs.	Alopecia. Rheumatism.
41	Mrs. F. M.	31	F		tubercular, left shoulder and knees.	Had 3 miscarriages. Sore throat. Headache.
42	G. T.	47	M	5 yrs. ago (?)	papular, nose and forehead.	No rheumatism.

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TABLE 1 —PRIVATE CASES.

No	NAME	AGE.	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
43	G. J.	2⅝	M		mucous patches about anus.	Son of No. 44. Hereditary syphilis. Teeth decayed. Mother has had miscarriages and sore throat. Child died of inflammation of brain.
44	G. J.	42	M	12 yrs. ago.	squamous, palmar.	Father of No. 43. Wife has had several miscarriages Sore throat. Rheumatism. Neuralgia.
45	G. J.	24	M	16 mos. ago.	papular, arms, hands and feet — mucous patches on tongue.	
46	Mrs. H. F.	24	F		tubercular.	Is married and has 3 healthy children. No history of infection.
47	H. B.	28	M	1869. Induration present.	macular — mucous patches in mouth.	Adenopathy. Sore throat. Onychia of little toe of left foot. Rheumatism. Alopecia.
48	H. T.	39	M		tubercular, end nose.	No history of infection.
49	J. J.	40	M	5 yrs. ago(?)	squamous, palmar.	11 yrs. ago lost right eye from inflammation, caused by sand, in Persia.
50	K. W.	32	M	3½ yrs ago. Scars can be seen	tubercular, in front of right ear.	
51	M. E.	53	M		tubercular, ulceration of right hand.	No history of infection.
52	L. E.	43	M	during war	tubercular, face.	No rheumatism. Iritis. Neuralgia.
53	L. A.	42	M	8 yrs. ago.	papulo-tubercular.	Glaucoma. Tenderness of tibia.
54	Mrs. L. L.	36	F		papulo-tubercular.	
55	M. J.	37	M	16 or 18 yrs. ago.	squamous, tongue — mucous patches on tongue.	Headache. Neuralgia.
56	M.	32	M		tubercular, cheeks and nose.	Rheumatism. No alopecia.
57	Mrs. M. H.	28	F		maculo-papular.	Wife of No. 88. 7 or 8 yrs. ago had child; lived 2 mos. No children since. Headache. Neuralgia. Sore throat. No alopecia. No history of infection.
58	Mrs. M. G.	42 10/12	F		squamous, palmar.	No history of infection.
59	M. F.	22	M		papular, general — mucous patches on pharynx & tonsils.	Denies ever having had chancre. Rheumatism.
60	M. A.	8	F		tubercular.	Hereditary syphilis. Nothing definite in reference to history. Father said to have had syphilis. Whole upper portion of chest, neck, right cheek, and chin affected—tissues destroyed.
61	N. E.	26	M	urethral. 6 mos. ago.	mucous patches about anus.	Father of No. 62. Adenopathy. Rheumatism. Sciatica. Venereal warts. Sore throat. Alopecia.
62	N.	2¾ mo.	M			Son of Nos. 31 and 61. Hereditary syphilis. Snuffles. Disease of larynx and lungs. Died when 3½ mos. old.
63	Mrs. O.	67	F		tubercular, left arm and left leg.	No history of infection.
64	S. J.	23	F		tubercular, right forearm.	Late hereditary syphilis. Notched teeth. Square forehead. Double vision. Mother has had ten still-born children.

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TABLE 1—PRIVATE CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
65	Mrs. W. H	30	F	lower lip 2 years ago. Induration present.	mucous patches in throat.	Wife of No. 125. Has had miscarriages. rheumatism, neuralgia, iritis, insomnia at first. Husband had sore on prepuce seven years ago.
66	Mrs. M. M.	45	F		tubercular, end of nose and nostrils.	Husband has eruption on face. Septum of nose perforated and nearly all destroyed.
67	Mrs. F. J.	38	F		tubercular, nose and lips.	No miscarriages. No rheumatism. History of syphilis.
68	G D.	44	M		squamous, palmar.	No history of syphilis. Sore throat. Dimness of vison of left eye.
69	S. G.	28	M	6 years ago.	papulo — squamous, general — mucous patches in mouth.	Sore throat, alopecia, rheumatism.
70	W. D.	$18\frac{10}{12}$	M		papulo-pustular.	Adenopathy, sore throat, rheumatism. Exposed six months ago; no sore (?). Iritis.
71	H. H.	50	M	19 yrs. ago.	tubercular, cheeks and nose.	Rheumatism, adenopathy. Nodes.
72	P. C.	26	M	Induration. Exposed June 8 and 20, appearance of sore July 5.		Sore throat. No eruption.
73	V. T.	44	M		papillomatous eruption of heel.	Had tubercular eruption ten years ago.
74	C. A.	61	M	slight but distinct hardness.		
75	B. W.	26	M	1½ years ago (?).	papular, general—gumma.	Infiltration of uvula.
76	B. J.	49	M	5 yrs. ago(?)	tubercular, chin.	No rheumatism. No headache.
77	Miss M. K.	21	F		tubercular, forehead between eye brows.	No history of infection. No rheumatism.
78	Mrs. J. C.	43	F		tubercular, nose and nostrils.	Neuralgia, alopecia.
79	Mrs. S. J.	40	F		tuberculo-crustaceous nose—gumma, soft palate.	Alopecia, frontal headache, excavation of soft palate.
80	Miss J. C.	27	F		papular, arms, legs, chin and neck—mucous patches, fauces.	No alopecia, no rheumatism; eruption came after vaccination five years ago; sore throat.
81	D. T.	43	M		tubercular, forehead.	Denies ever having had syphilis. No children. Married twenty years.
82	D. M.	1 m	F		macular, face, palms, soles, and buttocks.	Hereditary syphilis. No syphilitic history, but another child died when five months old one year ago. Baby snuffles.
83	P. B.	41	M			No history of infection. Eruption eight years ago. Locomotor ataxia; characteristic scars on legs. Wife had still born child five years ago.
84	R. M.	30	M	urethral; induration present.		
85	B. E.	23	M	2 months ago; induration present.		Adenopathy.

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TABLE 1—PRIVATE CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
86	T. O.	45	M	lip, seven years ago; scar visible.	tubercular, palms.	Iritis, neuralgia, rheumatism. Infection, possibly from end of segar.
87	Mrs. O. J.	32	F		tubercular, ear.	No rheumatism. No history of infection.
88	M. H.	39	M	2 weeks ago 3 mos. after exposure; indu'n still present.		Husband of No. 5 Adenopathy.
89	M. J.	28	M	urethral; induration.	macular, maculo-papular.	Adenopathy. Rheumatism.
90	B. R.	21	M	Induration present.	papular, squamous—mucous patches, lips and fauces.	Adenopathy.
91	G. D.	35?	M	Induration present.		Adenopathy.
92	C. G.	40	M	Induration present.		No adenopathy.
93	B. G.	36	M		papulo-tubercular, arms and ankles.	Father of No. 55, Table 2, with hereditary syphilis. Neuralgia; much bone trouble.
94	G. J.	33	M	of lip, from segar. Induration.		Adenopathy.
95	H. N.	25?	F	peculiar form.		
96	P. C.	33	M	in 1866 ?	papular, squamous—gummy, lower eyelid—mucous patches on tongue.	No rheumatism. No alopecia.
97	T. T.	48	M		papular.	Adenopathy.
98	R. J.	46	M	16 yrs. ago.	tub'cular, serpiginous back—mucous patches corner of mouth.	Wife has had no miscarriages.
99	S. B.	34	M	in 1867.	tubercular, legs.	Nodes of frontal bone, headache.
100	S. E.	28	M	2 mos. ago.	papular, hands and arms—mucous patches, ulceration of fauces.	
101	S. C.	34	M		mucous patches, mouth, tongue, and upper lip.	No rheumatism. No history of syphilis. Has had chancroids ?
102	S. J.	38	M	13 or 14 yrs. ago.	tubercular, arms.	Rheumatism. Neuralgia.
103	S. J.	26	M	in 1873. 6 years ago. Scars still to be seen.		No adenopathy.
104	S. W.	50	M		tubercular, neck.	History of infection.
105	S. J.	32	M		tubercular, right cheek	No history of infection.
106	T. S.	56	M		mucous patches, inside of left cheek.	Never exposed ? Canker sores 8 or 9 months a year.
107	M. S.	41	M	15 yrs. ago.	tubercular, nose.	
108	Mrs. T. O.	32½	F			Married 12½ years. Pregnant once. Premature delivery at 8 months, child dead 10 days of hydrocephalus.
109	Mrs. V—h.	36	F	on lip (?) 16 years ago.	papular, hands, face and thigh.	Rheumatism. No alopecia. No iritis; adenopathy.

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TABLE 1—PRIVATE CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
110	V. J.	30	M		tubercular, nose and left leg.	
111	Miss W. K.	30	F		papular, face.	Alopecia, adenopathy, neuralgia.
112	W. H.	39	M	in 1870. 9 years ago	papulo-tubercular — mucous patches, on tongue.	No adenopathy.
113	W. J.	35	M		tubercular, nose.	
114	T. W.	32	M	in 1869. 11 yrs. ago.		Nervous symptoms. Hyperæsthesia of scalp.
115	Mrs. A. T.	29	F	lower lip; induration present.	tubercular, face and forehead.	Adenopathy, neuralgia, rheumatism. Delivered of one still born child at full term A second child, born after being 2½ years under treatment, was healthy.
116	A. W.	23	M	6 mos. ago.	papulo-tubercular.	Adenopathy, alopecia.
117	Mrs. L. S.	23	F		papulo-tubercular.	Rheumatism, headache.
118	Miss A.	20	F			Sore throat, alopecia.
119	B. A	28	M	urethral; induration felt.	mucous patches, in throat.	Adenopathy.
120	Mrs. D. J.	25	F	lower lip. 4 yrs. ago.	gummy, of tongue.	Husband dead. Said to have had several diseases. Adenopathy.
121	Mrs. G. A.	26	F		tubercular, ulceration	Married 5 years. No children. No miscarriages. Adenopathy, neuralgia. Soreness of throat.
122	M. W.	35	M	10 yrs. ago?	tubercular, ulceration	Sore throat, iritis. Tenderness of bones. Adenopathy, alopecia.
123	S. M.	2 9/12	F			Hereditary syphilis. Dactylitis. No history of syphilis in father or mother
124	T. C.	22	M	urethral; induration felt.	papulo-pustular.	Adenopathy.
125	W. H.	39	M	7 years ago		Husband of No. 65. Adenopathy, rheumatism, aortic and mitral disease, with hypertrophy; also headache.
126	H. E.	34	M	uncertain.	tubercular, nose.	Headache. No rheumatism. Neuralgia. Wife has had no miscarriages.
127	Mrs. W. J.	22	F	1 year ago?	mucous patches, in throat.	Two miscarriages, rheumatism. Perforation of palate.
128	Mrs. T. J.	30	F		tubercular, nose, cheeks, &c.	Sore throat. No alopecia.
129	Mrs. S. J.	24	F	2½ yrs. ago	tubercular, nose.	Alopecia. Premature birth at 7 months; child lived 7 weeks, had snuffles. Three other children born, 2 born after coming under my treatment.
130	Mrs. S. A.	39	F		tubercular—gummy.	Tenderness of bones. Prominent frontal eminences. Erythematous sore throat, No alopecia.
131	Mrs. O. G.	26	F		tubercular, chin.	No history of infection.
132	Mrs. D. K.	44	F		tubercular, nose.	No history of infection. Headache.
133	Mrs. T. R.	41	F		tubercular, nose.	No history of infection.

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TABLE 1—PRIVATE CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
134	Miss H. L.	23	F		tubercular, nose.	Alopecia.
135	Miss H. L.	21	F		tubercular, ulceration right knee.	Neuralgia, rheumatism.
136	Mrs. M. M.	28	F		tubercular, middle of back.	Three miscarriages. Husband died of hasty consumption. No rheumatism, no neuralgia, no sore throat.
137	F. P.	32	M	14 yrs. ago.	tubercular, scalp, palm and penis.	Tongue, mouth, and throat sore.
138	F. J.	26	M	1 year ago.	papular, forehead and arms—mucous patches at angles of mouth and at anus.	Adenopathy.
139	H. G.	31	M	5 years ago		Occasional headache. Wife two children, no miscarriages.
140	H. L.	33	M		tubercular, ulceration of scalp — gummy sarcocele — mucous patches on tongue.	No rheumatism, no headache.
141	H. H.	45	M	in 1873.	tubercular, perinæum and scrotum.	Rheumatism, neuralgia, and severe and recurrent periostitis.
142	H. M.	57	M	9 mos. ago.	papular, squamous	Husband of No. 143. Headache. No rheumatism.
143	Mrs. H. M.	34	F		macular, papular, and squamous — mucous patches, corner of mouth.	Wife of No. 142. Throat and palate congested.
144	J. D.	29	M	5 mos. ago. Hardness still pres't.	macular, general.	Rheumatism, alopecia. Amyloid disease of the liver (?) later.
145	Mrs. K. F.	29	F		tubercular, nose.	Married six years. No children, no miscarriages. No history of infection. Rheumatism. Scarring of hard palate.
146	L. F.	40	M	lower lip from segar. Hardness distinct.	papular—mucous patches, of lip.	Smoked segars made by patient affected with chancroids ?
147	L. L.	48	M	3 mos. ago.	macular—papular.	
148	L. B.	20½	M	5 mos. ago. Hardness present.	macular ?—mucous patches at anus.	Alopecia, adenopathy, headache. No rheumatism.
149	Mrs. M. W.	36	F		papulo-squamous, hands.	Muscular rheumatism.
150	M. C.	22	M	in 1875.	tubercular, ulceration on leg.	Married 2 years. Wife no miscarriages.

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
1	L. J.	27	M		mucous patches, tongue and throat.	
2	M. F.	42	M		mucous patches, ulcers pharynx and soft palate.	
3	M. H.	52	M			
4	M. D.	50	M		mucous patches, on tongue.	
5	V. P.	23	M	Mixed.		Large ulcerating chancroids, followed by severe and prolonged syphilis.
6	W. E.	38	M		maculo-papular, head, —mucous patches.	
7	M. E.	32	M	Induration present.	macular.	
8	D. D.	33	M		tubercular, buttocks.	
9	M. R.	27	M			Osteocopic pains. Periostitis, tibiæ, catarrh, cachexia.
10	C. G.	40	M	Induration		
11	D. J.	30	M			
12	H. J.	45	F		papular, squamous.	Wife of No. 13.
13	H. P.	42	M F			Husband of No. 12. Has brain disease of syphilitic origin, dementia, insomnia, delirium.
14	D. P.	35	M	Induration		Adenopathy.
15	M. P.	26	M	9 mos. ago.	macular, arms.	
16	D. E.	35	M	Induration		
17	Mrs. L. T.	30	F			Atrophy of hand from syphilitic nerve-lesion. Child, 15 years old, has hereditary syphilis.
18	L. W.	31	M		tubercular, left forehead.	
19	Mrs. T. M.	43	F		gummy, ulcer on leg.	General eruption 9 years previous.
20	Mrs. P. E.	50	F		tubercular, nose and lip.	
21	Mrs. K.	45	F		tubercular, face—mucous patches, forehead.	Headache, drowsiness, tenderness on pressure over forehead, sternal tenderness, nodes in forehead.
22	R. B.	20	F		macular, squamous, face.	
23	M. W.	32	M	Exposed 5 weeks ago.		
24	S. M.	25	M	about 4 mos. ago.		Iritis. Remains of general pustular eruption.
25	Mrs. B. U.	42	F		gummy ulcer on leg	Rather obscure history of infection.
26	Mrs. L.	26	F		tubercular, knee.	Pigmentary syphilide of neck.
27	T. S.	25	M		mucous patches.	
28	S. L.	21	F		mucous patches on anus.	

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
29	A. J.	6 wks	F		macular, feet and palms and arms—papular, around mouth—mucous patches at anus.	Hereditary syphilis. Mother has had premature birth of a still born child, after that a miscarriage, then this child. Previously had 2 healthy children. This child has eruption 3 weeks.
30	P. L.	40	F			Adenopathy, rheumatism.
31	B. C.	22	M			Periostitis of tibia, also nodes.
32	L. J.	38	M	15 or 20 years ago.	tubercular, penis and head.	Tubercular eruption developed on forehead when under treatment. Has had dizziness in head.
33	D. F.	21	M		gummy ulcer on face, condylomata on penis.	
34	P. J.	38	M	4 yrs. ago?	squamous, psoriatic.	Tenderness of tibia.
35	M. A.	39	M	3½ yrs. ago	tubercular, eyebrows and knees—mucous patches on tongue.	
36	D. J.	24	M		tubercular, right arm and leg.	
37	R. M.	19	F	1 year ago.	mucous patches, on tongue, upper lip and anus.	
38	P. M.	26	F		rupial.	Syphilitic paralysis, left arm and leg.
39	Mrs. B. E	54	F		tubercular, right leg.	
40	Mrs. S. H.	71	F		gummy ulcer on right ankle.	Has had ulcer off and on for 36 years.
41	V. L.	24	M	Prepuce. Induration present.		
42	S. J.	22	M	Induration present.		
43	H. C.	25	M	6 weeks ago	pustular of scalp.	
44	C. M.	52	F		tubercular, whole of leg—mucous patches on tonsils and pharynx.	Scars of eruption, which were present 18 years ago, now to be seen on shin.
45	W. J.	33	M	2 yrs. ago.	ulcer of tongue.	
46	L. C.	21	M		mucous patches in mouth.	Analgesia well marked.
47	G. J.	40	M	10 days after coitus lasted 6 weeks.		Onychia both thumbs.
48	M. J.	25	M	5 weeks after coitus.	papular, forehead, chin and legs—mucous patches at corner of mouth.	Adenopathy, rheumatism, paralysis, hebetude.
49	Mrs. M. K.	25	F		papulo-pustular.	Been in hospital 5 weeks. Has since had 2 children both of whom are syphilitic. Nos. 50 and 51.
50	M. M.	7 m	F		mucous patches on vulva.	Hereditary syphilis. Daughter of No. 49 and sister of No. 50. Very great improvement under treatment.
51	M. W.	2 m	M		macular, general.	Hereditary syphilis. Son of No. 49 and brother of No. 50. Died when 8 months old.

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
52	D. M.	36	F		tubercular, knee.	Bursitis.
53	C. R.	28	M		tubercular, serpiginous right arm	
54	G. L.	42	F		tubercular, right cheek	
55	B. E.	18¼	M			Hereditary syphilis. Father had nervous syphilis (93, table 1.) Enormous nodes on tibiæ. Frontal eminences prominent. Keratitis. Notched teeth. Tenderness of bones.
56	N. A.	25	M	Induration		
57	M. T.	10	F		gummy, ulcer of right leg.	Acquired from chancre on breast of mother who had nursed a strange child. Nodes of both tibiæ.
58	Miss A.	39	F		tubercular, left knee—mucous patches on tonsils.	Sore throat.
59	C. F.	17	M	7 mos. ago.	mucous patches on mouth and anus.	
60	H. P.	26	M		papulo—tubercular.	
61	J. M.	31	F		papular.	Peculiar form.
62	B. M.	35	F		gummy ulcer of knee.	
63	S. S.	34	M		papular, scalp.	Eczematiform.
64	Mrs. M. L.	40	F		tubercular, serpiginous left arm.	Eczema of hand.
65	C. D.	47	M		tubercular, right cheek, also under arm and back.	
66	L. E.	31	M	Induration	papular eruption, subsequently.	Iritis.
67	F. C.	18¼	M		gummy ulcer on leg.	Hereditary? Had eruption on face when 10 years old. When 18 years had eruption on leg. Cicatrices still to be seen.
68	H. W.	33	M		gummy ulcer on leg.	
69	C. G.	25	M	Induration	roseola.	Sternal tenderness.
70	D. C.	24	M	Multiple.		
71	D. W.	38	M		papular scalp.	Eczematiform.
72	C. F.	27	M	Induration		
73	A. W.	19	M		mucous patches, on lip.	
74	O. J.	25	M		papular scalp.	
75	G. M.	24	M	Induration	papular penis — mucous patches on lip.	Sore throat.
76	W. J.	48	M		tubercular — gummy ulcer.	
77	Mrs. E.	48	F		gummy ulcer on foot.	
78	A. S.	25	F	on lip.		
79	F. P.	31	M		papular.	Adenopathy, pleuritic effusion.
80	B. R.	28	M		mucous patches.	Alopecia.
81	M. P	19	M	1 mo. ago. Induration	papular.	Adenopathy.
82	R. W.	35	M		mucous patches in throat.	

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
83	C. C.	22	M	5 mos. ago.		Adenopathy, sciatica.
84	H. M.	25	F			Buraitis.
85	H. F.	58	M		papular.	
86	C. W.	33	M	14 yrs. ago.		Adenopathy. Wife had one miscarriage.
87	O. J.	22	M	Induration	mucous patches on tongue and scrotum.	Adenopathy and chancroids.
88	V. J.	20	M	3 mos. ago.	macular.	Adenopathy, sore throat.
89	F. J.	20	M	Multiple. Induration		Adenopathy.
90	Mrs. F.	52	F			
91	Mrs. D. M.	38	F		gummy ulcer on leg.	No miscarriages.
92	Miss W.	20	F		tubercular nose.	Frontal osteitis. Nodes on tibia. Headache.
93	D. T.	35	M	2 mos. ago.	maculopa-pular; mucous patches, tongue	Adenopathy.
94	M. A.	45	F		gummy ulcer on legs.	
95	B. B.	27	M		gummy ulcer on left leg.	
96	M. J.	26	M			Venereal warts, adenopathy.
97	C. M.	27	M	Induration	macular, general—tubercular, subsequently.	Adenopathy, rheumatism, iritis, cough, night sweats.
98	Mrs. M. G.	60	F		gummy ulcer on leg.	Nocturnal pains, dimness of vision.
99	T. G.	21	M	Induration		
100	W. P.	27	M	3 yrs ago.	ulcerative pharyngitis.	
101	S. J.	35	M		gummy ulcer of penis.	
102	Mrs. W.	36	F		tubercular, knee.	Osteocopic pains.
103	M. E.	21	M	Induration	tubercular, thigh.	
104	R. P.	39	M		tubercular, face.	No history of syphilis.
105	M. P.	29	M	Induration		No adenopathy.
106	M. J.	35	M		mucous patches, on glans penis.	
107	F. F.	59	M		gummy ulcer on leg.	
108	Miss B.	24	F		tubercular, face.	Pigmentary of neck, alopecia, miscarriage.
109	F.	20	M		papular; mucous patches in mouth.	Adenopathy. Denies having had chancre.
110	B. W.	21	M	Induration	condylomata.	
111	C. J.	21	M	3 mos. ago.	papular, palms, feet, &c.	Adenopathy, sore throat, alopecia.
112	Mrs. W. E.	19	F			
113	H. J.	24	M	Induration	papular.	

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
114	D. M.	35	F		tubercular, palms and knees.	Has had 5 miscarriages.
115	D. L.	24	M	Induration		
116	Mrs. B.	34	F		gummy ulcer of back.	Has had miscarriages.
117	A. J.	18	M	Induration		Balanitis.
118	B. J.	21	M			Verruca.
119	R. S.	28	F			Seborrhœa.
120	B. W.	35	F		gummy ulcer on right hip.	
121	G. W.	24	M			Verruca.
122	M.	24	M		papular; condylomata	Adenopathy, rheumatism, iritis.
123	V. M.	18	F	3 mos. ago.	macular; mucous patches in mouth.	Paralysis of palate.
124	N. J.	23	M		papular, general.	Adenopathy.
125	K. M.	38	M		gummy ulcer on leg.	
126	G. M.	16	F		tubercular, knees and elbow.	Osteocopic pains. Mother died of cancer.
127	W. J.	41	M	3 mos. ago.	maculo-papular; mucous patches, throat	Adenopathy.
128	B. A.	32	M	10 yrs ago.	tubercular; gummy ulcers.	
129	I W.	40	M	4 years ago.	gummy ulceration involving penis and scrotum.	No alopecia.
130	M. M.	21	F			
131	V. K.	38	F		tubercular, forehead and thigh.	
132	S. L.	34	M	4 years ago.	tubercular, face.	Alopecia.
133	M. J.	24	M	excised.	papular.	Eruption after excision of chancre.
134	Mrs. C.	33	F	9 mos. ago		Alopecia, headache.
135	S. F.	50	M		tubercular, neck and shoulders.	Very peculiar eruption. Wife had no miscarriages.
136	P. W.	7	M		tubercular, side of face.	Hereditary syphilis. Son of No. 149.
137	K. D.	23	M	Induration		
138	W. S.	38	M		papular, hands.	
139	Mrs. P.	65	F		mucous patches on tongue.	
140	A. E.	37	F		gummy ulceration.	
141	C. K.	18	F	2½ years ago.	papulo-tubercular.	
142	Mrs. L.	35	F		tubercular, leg.	
143	W. C.	20	M		tubercular.	Denies all history of infection.
144	N. P.	27	M	Induration	papular.	Adenopathy.
145	P. J.	56	M	Induration		

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
146	P. F.	21	M	Induration	maculo-papular; gummy ulcer on side of tongue — mucous patches on arch of palate.	Adenopathy, analgesia.
147	Mrs. B. M.	39	F			Hygroma.
148	C. J.	30	M	Induration		Adenopathy.
149	P. T.	42	M	8 yrs. ago.		Father of No. 136. Dizziness, diplopia, pearly condition of mouth, no eruption, no rheumatism.
150	M. J.	35	M	Induration	maculo-papular; gumma of upper lip.	Adenopathy.
151	Mrs. W. E.	45	F		papular, squamous.	
152	P. G.	28	M			Cephalalgia.
153	W. J.	34	M	Induration	macular.	Adenopathy, hygroma.
154	Y. T.	23	M	Multiple. Induration		Adenopathy.
155	M. T.	23	M	2 yrs. ago. Induration	mucous patches at corner of mouth.	Adenopathy.
156	F. P.	32	M	1½ yrs. ago		
157	J. W.	40	M		tubercular.	
158	Mrs. M. H.	36	F			Bursitis right knee. Has had miscarriages. Husband has an eruption.
159	D. J.	23	M	Doubtful.	maculo-papular; mucous patches on upper lip.	Adenopathy, sternal tenderness.
160	D. J.	49	M			
161	K. M.	35	M			Tenderness of tibia.
162	Mrs. M. M.	30	F		tubercular, upper lip.	Miscarriages.
163	W. J.	29	M	14 yrs. ago.	gumma on arm.	
164	Mrs. M.	27	F			Mother of Nos. 165 and 166. Rheumatism, nodes on tibia and scarring, alopecia, sore throat.
165	M. L.	4	F			Daughter of No. 164, and sister of No. 166. Hereditary syphilis. onychia.
166	M. E.	9 m	M			Hereditary syphilis, onychia. Son of No. 164 and brother of No 165.
167	M. J.	24	M	Induration	papular, general—mucous patches, throat	Rheumatism, very severe sore throat.
168	M. F.	18	M	4 mos. ago.	papular, elbows—mucous patches on lips.	
169	K. L.	23	M	Induration		
170	K. J.	20	M	Induration		
171	W. F.	26	M	Induration present.	papular, chest.	Adenopathy.
172	F. S.	23	M	Induration	papular, general—mucous patches, tongue	
173	Mrs. H.	26	F		tubercular, forehead and face.	

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
174	L. C.	30	M		macular.	
175	D. E.	20	M	Urethral.	macular — mucous patches in mouth.	Adenopathy.
176	Mrs. B. C.	26	F		papular, leg.	
177	D. F.	35	M			Had syphilis in 1863. Neuralgia. No other signs of syphilis.
178	T J.	31	M		ulcerating syphilidê	Rheumatism, nodes, sciatica.
179	F. J.	19	M	Induration		
180	S. W.	19	M	3 mos. ago.	papular, general—mucous patches, mouth	Alopecia.
181	R.	29	M		mucous patches in throat.	Nodes on ribs.
182	M. J.	24	M		papular.	
183	Miss R. M.	42	F		gummy ulceration on knee.	Tenderness of tibiæ.
184	A. R.	21	M	Induration		
185	H. J.	27	M	1 year.	papulo—tubercular.	
186	H. T.	12	M			
187	C. P.	37	M	8 mos. ago.		
188	Miss H. L.	22	F		tubercular, forehead.	
189	M. P.	26	M			Venereal warts.
190	F. J.	25	M	1½ yrs. ago	papular. general—mucous patches on left tonsil.	Adenopathy.
191	H. J.	26	M	2½ yrs. ago?	gumma on uvula.	Adenopathy.
192	R. H.	26	M		erythematous — mucous patches in throat.	Adenopathy.
193	M. J.	25	M	3 mos. ago.	mucous patches in mouth.	Adenopathy.
194	A. P.	59	M		gumma of palate.	
195	C. J.	30	M	Induration		Adenopathy.
196	Mrs. S.	43	F		gummy ulcer of leg.	
197	G. H.	34	M		tubercular, scarring.	
198	C. G.	31	M	10 yrs. ago.	gumma of cheek.	Loss of hair, ozena, strabismus.
199	H. J.	20	M		pustular left leg.	Deafness.
200	K. D.	35	M		tubercular, face.	No history of infection.
201	M. V.	33	M		papular, nose.	
202	N. D.	23	M	7 years ago.	erythematous.	
203	G. A.	28	M	5 wks. ago.	erythematous.	Adenopathy.
204	S. J.	55	M		gummy, lip.	
205	D. J.	18	M	Multiple.	mucous patches on lip and mouth.	
206	F. J.	24	M		papular, knee and penis.	

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
207	M. J.	39	M			
208	G. E.	24	M		macular—mucous patches in mouth.	Adenopathy.
209	C. J.	37	M	8 mos. ago.		Sore throat.
210	Mrs. F.	51	F		papulo - squamous palmar.	No history of infection.
211	Miss B. A.	31	F		papulo - squamous plantar.	
212	B. R.	21	M	1 mo. ago.	papular, general.	Adenopathy.
213	M. J.	21	M	6 days ago, induration		
214	C. T.	34	M	18 yrs. ago.	gumma of testicle.	
215	M. W.	26	M	Induration		
216	C. E.	40	M	6 mos. ago.	pustulo - tubercular.	Jaundice.
217	G. M.	28	F	Induration	tubercular, forehead.	Sterility.
218	T. L.	48	M	3 wks ago, induration	papular, body.	Adenopathy.
219	G. J.	25	M	Induration		Adenopathy.
220	R. J.	28	M	Induration	mucous patches in throat.	
221	M. J.	17	M	Induration	papular, penis.	Adenopathy.
222	B. P.	32	M	4 years ago		Nodes of tibia.
223	S. A.	26	M	1 year ago.	mucous patches on left tonsil.	
224	H. J.	32	M	4 years ago	tubercular, hand and arm.	Rheumatism.
225	S. E.	20	M	3 years ago	gumma, penis and inguinal region.	
226	V. W.	23	M	6 mos. ago.	papular, buttocks and legs.	Adenopathy.
227	Mr. P.	54	M		papulo-squamous.	Iritis ?
228	Mrs. D.	26	F		papular, sole of foot.	
229	Mrs. G. M.	20	F		papulo-squamous.	
230	S. W.	32	M	8 mos. ago, induration		
231	Mrs. R. S.	46	F		papulo-squamous.	
232	H. R.	27	M		macular, erythema.	
233	H. E.	27	M	Induration		
234	Mrs. M. C.	32	F		tubercular, nose.	All children died; one syphilitic.
235	C. S.	34	M	1 year ago.	macular, general.	
236	M. T.	24	M		papular.	
237	C. M	4 3/12	F			Hereditary syphilis. Mother had no miscarriages.
38	T. J.	25	M	6 months	papulo-tubercular.	No rheumatism. Sore throat.

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
239	P. J.	32	M		papulo-squamous.	
240	D. W.	23	M		papulo-squamous.	
241	B. J.	19	M	slight induration.		
242	H. T.	36	M		gummy ulcer on head.	
243	M. G.	23	M	Induration	mucous patches, condylomata.	
244	N. E.	42	M		tubercular.	
245	S. E.	19	M	1 year ago.	maculo-papular.	
246	Mrs. L.	24	F		papulo-tubercular.	
247	Mrs. G. J.	29	F	3 yrs. ago.	papulo - tubercular — mucous patches in mouth.	
248	L. S.	17	M		tubercular.	
249	H. A.	26	M	lower lip.	mucous patches on lips.	Adenopathy.
250	Mrs. M.	44	F		papulo-tubercular.	
251	W. P.	24	M	5 wks. ago.	maculo-papular.	Adenopathy.
252	S. J.	24	M	2 months.	macular.	Adenopathy ; rheumatism.
253	L. J.	26	M	14 mos. ago	squamous.	Rheumatism.
254	F. J.	26	M	3 wks. ago; induration	papular.	Alopecia ; adenopathy.
255	M. A.	24	F		tubercular, left hand.	
256	Miss. B. L.	23	F		maculo-papular.	
257	M. W.	33	M		maculo-papular.	
258	R. H.	21	M	Induration		Adenopathy.
259	Mrs. C. M.	28	F		gummata, knee and shoulder.	
260	B. J.	26	M	2 yrs. ago.	papular, general.	
261	Mrs. O. A.	17	F		papular.	
262	F. M.	21	F		maculo-papular.	
263	P. J.	26	M		maculo-papular.	
264	E. J.	22	M		macular.	
265	B. J.	21	M			
266	Mrs. S. E.	40	F		tubercular, left cheek.	Miscarriages.
267	K. C.	25	M	Induration		
268	S J.	32	M	Induration		
269	G. C.	21	M	Induration present.	mucous patches in throat.	Adenopathy.
270	O. J.	22	M		papular.	
271	F. M.	59	F		tubercular, cheek and arms.	

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TABLE 2—PUBLIC CASES.

No	NAME	AGE	SEX	CHANCRE.	OTHER MANIFESTATIONS.	MISCELLANEOUS.
272	B. W.	21	M	8 mos. ago.	macular, general.	
273	L. E.	20	M		gumma of penis.	
274	E. L.	24	M	Induration	papular—mucous patches in mouth.	
275	W. W.	24	M	1 year ago.	vesicular.	Adenopathy.
276	H. J.	32	F		gumma, throat.	
277	B. W.	22	M	Induration		
278	C. M.	45	F		gummy ulceration.	
279	H. A.	20	M	Induration		
280	G. S.	30	M	Induration		
281	C. T.	20	M	7 wks. ago; induration	maculo-papular.	
282	——	25	F		tubercular.	
283	——	5/12	M		mucous patches on scrotum.	Hereditary syphilis.
284	M. J.	25	M		maculo-papular.	Adenopathy.
285	D. C.	19	M	multiple, induration felt.		Adenopathy.
286	K. A.	35	M	2 mos. ago.	papular.	Adenopathy; sore throat.
287	H. S.	23	M	4 mos. ago.		Alopecia.
288	J. J.	58	M		gummy ulcer on leg.	Rheumatism. Wife had 2 or 3 miscarriages.
289	Mrs. G. E.	38	F		tubercular, feet.	Sternal and tibial tenderness. Rheumatism.
290	M. D.	27	M	Induration present.	papulo-pustular.	Adenopathy. Analgesia.
291	S. M.	10/12	M		mucous patches on scrotum.	Hereditary syphilis.
292	S. J.	22	M		papular, disseminate.	
293	M. A.	42	F		gumma, throat.	
294	Mrs. G. W.	50	F		papulo-tubercular.	
295	S. N.	42	M	16 yrs. ago.	gumma, eyebrows.	Wife has had no miscarriages.
296	Mrs. G. E.	36	F			
297	D. M.	27 wks	F		macular, erythema.	Hereditary syphilis.
298	M. T.	23	M	Induration		
299	C. J.	30	M	7 yrs. ago?	papular, forehead—mucous patches on lip.	Adenopathy; alopecia; sore throat.
300	M. J.	49	M	2 or 3 years ago?	papular.	Alopecia; tenderness of bones; no adenopathy.

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XIX.—THE MUSCLES OF THE LARYNX AND THE LARYNGOSCOPIC IMAGES PRODUCED BY THEIR PARALYSES.

By LOUIS ELSBERG, M.D., of New York City, Professor of Laryngology and Diseases of the Throat in Dartmouth Medical College.

I deem it one of the duties of medical specialists toward the profession to add from time to time the results of their researches to the general stock of information, and to endeavor, so far as possible, to make special knowledge and skill common property.

A few years ago, in a lecture before this Society on "The mechanism of the voice in relation to its disordered conditions," I promised on a future occasion to bring before the delegates and members the "Laryngoscopic appearances of laryngeal paralyses," and am now about to redeem this promise. Not to mince matters, I may say that most physicians find it difficult to remember even the names and positions of the laryngeal muscles, much less are they able to recognize the differences in the paralyses of the individual muscles or sets of muscles. My first endeavor, therefore, will be to impress upon your minds a picture of the intrinsic muscles of the larynx,—a picture which I hope none of you will ever forget.

The framework of the larynx contains nearly always 9, occasionally 11, separate cartilages, viz.: 3 single pieces and 3, occasionally 4, pairs. To remember them use the following mnemonic device: Think of writing the word "Coffee," and after having written a capital "C," as the first letter, change your mind and write the word "Tea" in capitals; then add the small letter "c" for cream, and "s" for sugar, and another "s" for an exceptional larger quantity of sugar than that taken by most people.

Then "C" stands for Cricoid, the basis or ring cartilage; "T" for Thyroid, the shield cartilage; "E" for Epiglottis, the cover cartilage; and "A" for Arytenoid, the moving cartilages. (These are the large cartilages of the Larynx.) The small "c" stands for cuneiform, the prop cartilages; "s" for supra-arytenoid, the buffer cartilages; and the additional "s" for sesamoid, the exceptional cartilages.

The Cricoid or basis cartilage is narrow in front and rises up to be very broad behind, like a signet or seal ring. This is connected with the two lower horns of the Thyroid or shield

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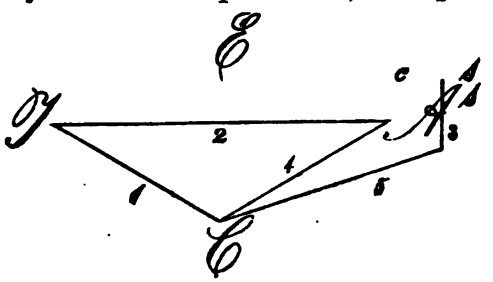
cartilage, the articulation being a hinge-joint. Into a deep notch in the front upper border of the Thyroid cartilage, the Epiglottis or cover cartilage is inserted, with a motion also something like that of a hinge; while upon the top of the Cricoid cartilage behind are the two Arytenoids or moving cartilages, each attached by a ball-and-socket joint. The two vocal bands are attached in front to the anterior vocal process, a prominence on the inside of the so called Adam's apple (the angle of the shield cartilage), and behind to the two vocal processes of the arytenoids. The two buffer cartilages (supra-arytenoids) are placed, one on the top of each arytenoid cartilage, to deaden or distribute pressure, preventing injury to the larynx, especially in swallowing hard morsels. The two prop cartilages (cuneiforms) hold up the folds of the mucous membrane which extend, one on each side, from the arytenoid cartilage to the epiglottis. (These folds constitute the lateral walls of the upper aperture of the larynx, and these wedge-shaped cartilages help to keep the aperture patulous. Sometimes they are absent, especially when, on account of great development of the arytenoids, the ary-epiglottic folds are tense without them.)

The exceptional pair of cartilages, sesamoids, are situated at the upper lateral outer edge of the arytenoids, and, when present, facilitate somewhat the action of the muscles that pull the epiglottis backward.

Now unite the three lower capital letters by lines, draw a transverse line behind the "A" and unite its lower terminus with the letter "C;" then the five intrinsic muscles of the larynx, those especially concerned in phonation, are represented thus:



1. The Anterior muscles, viz., thyro-cricoid; the tensors of the vocal bands } Constrictors or
2. The Interior " viz., thyro-arytenoid; the straighteners. " " } Narrowers of
3. Transverse muscle, viz., arytenoid, the transverse adductor... " " } the rima glotidis
4. Lateral muscles, viz., lat. crico-arytenoid; the lat. adductors.. " " } Dilators or Wideners of the rima glottidis
5. Posterior muscles, viz., post. crico-arytenoid; the abductors.. " "

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Of these muscles, the anterior (together with the superior muscles i. e., the thyro-epiglottic and ary-epiglottic) are supplied by the superior laryngeal nerve, while all the rest are supplied by the inferior or recurrent laryngeal nerve.

By the advice of our President, I am going to abstain from minute and intricate details, but if you will follow me a little further I can put you, I think, in possession of knowledge necessary for the diagnosis and successful treatment of cases of paralysis of these muscles. The isolated paralysis of each of these muscles produces a laryngoscopic image easily recognized and unmistakable; and when this is understood it is not difficult to make out the image caused by paralysis of several of the muscles combined. The manner of making a laryngoscopic examination may be learned by almost any physician worthy of the name, with an expenditure of less than an hour's time, and not much more than a dollar in money for the purchase of a laryngoscopic mirror. Each one of you, therefore, should acquire the ability to inspect a larynx. Examining a healthy larynx, we find the vocal bands widely separated during respiration and closely approximated during phonation. During expiration they are not quite as widely apart as during inspiration; the position of the vocal bands, therefore, when they hug the lateral walls of the larynx is called *the inspiratory position*, and when they stand in the median line *the phonatory position.* (Illustrated by the position of the index and middle fingers.)

In the dead body the vocal bands have a position somewhere between the inspiratory and phonatory positions, because they can be neither abducted to the sides nor adducted to the middle line of the larynx; such a position of the vocal bands, therefore, is called *the cadaveric position.* (In this position the vocal bands leave a chink between them somewhat like the one represented in fig. 1x2x3x4, p. 278.)

If in affections of either the brain or the pneumogastric or the recurrent nerve, all the laryngeal muscles on either both sides or on one side are paralyzed, the corresponding vocal bands, of course, assume a position uninfluenced by muscular action, i. e., like the cadaveric position. When they are fixed in this position either on one side or on both, during attempts at phonation as well as during respiration, the appearance is very characteristic, and easily recognized by means of

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the laryngoscope, so that the diagnosis is clear and conclusive. In such a case there is no real difficulty of breathing, but a good deal of *leakage* of air, as I call it, and therefore waste of breath. The voice is weak or else reduced to an almost inaudible whisper. The patient cannot cough, expectorate or speak properly because in these acts it is necessary to close the rima glottidis; and this he cannot do. Speaking, of course, requires a greater effort, the muscles of expiration (especially the abdominal) are unusually strained; therefore discomfort is felt and, quickly, fatigue. On forced inspiration a stridulous sound is often produced, which comes from the air passing the upper aperture of the larynx and flaccid vocal bands.

But, when the paralysis, whether bilateral or unilateral, *is or becomes incomplete*, a very curious and, as yet unexplained, fact has been observed which is of very great importance for general medical practitioners as well as for specialists to know; it is the fact that the abductor filaments (those that separate the vocal bands), are more prone to be affected than the adductor filaments (those that shut up the breathing space), and that if in a disease in which both the abductors and the adductors are affected, *recovery* takes place, the adductors are apt to recover first or exclusively; so that in such a case a patient *during the progress of recovery* is in danger of a dyspnœa, which may necessitate tracheotomy to prevent death!

Paralysis of the Narrowers of the rima glottidis causes during attempted phonation more or less leakage of air, and gives its characteristic image during that act; while paralysis of the Wideners of the rima glottidis causes more or less dyspnœa and must be examined for its characteristic image during inspiration and expiration. The first causes phonatory leakage, the second respiratory insufficiency. Their characteristic images are shown on the following page.

1. A wavy outline of the inner borders of the lax-looking vocal bands during phonation indicates paralysis of the anterior muscles, the thyro-cricoid, the tensors of the vocal bands. (See fig. 1.)

2. An elliptical opening between the borders of the ligamentous portions of the vocal bands on phonation, while the cartilaginous portions meet in the median line, indicates paralysis of the interior muscles, the thyro-arytenoids, the straighteners of the vocal bands. (See fig. 2.)

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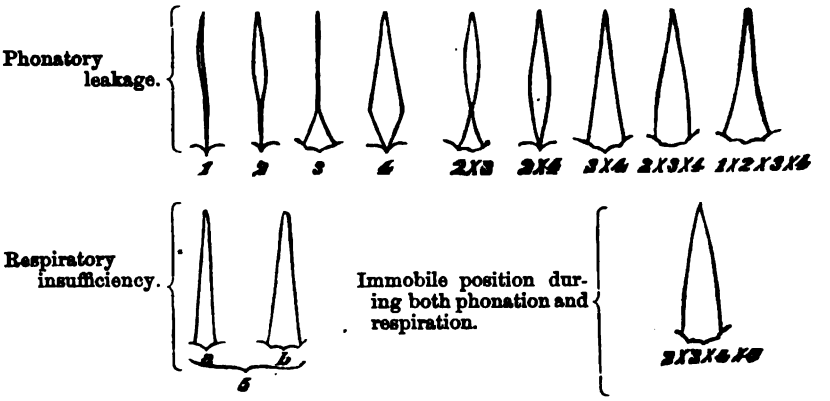
3. An opening posteriorly of more or less sharp triangular form on phonation indicates paralysis of the transverse muscle, the arytenoid, the transverse adductor of the vocal bands. (See fig. 3.)



4. A rhomboidal opening on phonatory effort, the triangular opening in front extending to the vocal processes of the arytenoids and being nearly as wide as that in the cadaveric position of the vocal bands, while the triangular space behind is quite short, extending along the cartilaginous glottis, indicates paralysis of the lateral muscles, viz.: the lateral crico-arytenoids, the lateral adductors of the vocal bands. (See fig. 4.)

5. A narrow opening between the vocal bands during respiration, not wider than the cadaveric position, becoming more narrow during forced inspiration than during expiration, indicates paralysis of the posterior muscles, viz., the posterior crico-arytenoids, the abductors of the vocal bands. (See fig. 5, in which *a* represents the opening during inspiration and *b* that during expiration.)

If in either of these five cases the paralysis be confined to one side, a lateral half of the image described, due to the position of the affected vocal band, will be seen on the corresponding side, while the other half of the rima glottidis will present a normal appearance. The healthy vocal band may even show an excess of movement, so as to make up as far as possible for the inactive one, and thus give rise to a "lop-sided" or unsymmetrical figure.

If several muscles be affected simultaneously the image seen will be a resultant of the appearances described as being

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caused by each of the muscles involved. Isolated paralysis of the lateral muscles is very rare; usually paralysis either of the transverse muscles or interior is combined with it (fig. 3x4), thus producing a triangular instead of a lozenge-shaped opening. Frequently, paralysis of the interior muscles is combined with that of the transverse muscles, producing a figure something like that of an hour-glass (as seen in fig. 2x3). The paralysis of the interior and that of the lateral frequently go together (fig. 2x4), etc.

Successful treatment is in most cases of laryngeal paralysis entirely dependent on correct differential diagnosis as to the particular muscle or muscles affected, because, in addition to general medication and other measures, such as either complete rest or methodical exercise of the voice, it often involves local applications and electrical excitation by the aid of the laryngoscope.

XX.—AN IMPROVED FREEZING POLY-MICROTOME.

By WM. HAILES, M. D., Albany, N. Y.

As a matter of interest to those engaged in microscopy, I present a cut and description of a freezing microtome, which has stood the test of several years actual work in the pathological laboratory of the Albany Medical College. (See cut on the following page.)

DIRECTIONS FOR USING THE FREEZING POLY-MICROTOME.

When the microtome is used for freezing, remove the glass table, cover the ice-jacket with gutta-percha to prevent absorption of heat from the atmosphere. Oil the screw and plunger to prevent their becoming fixed by the freezing (too much oil interferes with freezing). Screw the cylinder into position on the bed-plate, close the top with a tightly-fitting cork to prevent the entrance of ice, etc. Put on the cover and fill the ice jacket with finely-powdered ice and coarse salt through the hopper opening, and stir the contents by rotating the hopper cover. In a few moments the cylinder will be cooled down to freezing point. Remove the hopper lid and cork, fill the cylinder two-thirds full with mucilage of gum acacia (B. P.) [2 parts gum to 3 parts of water], then replace the cork and hopper lid and stir for a few moments.

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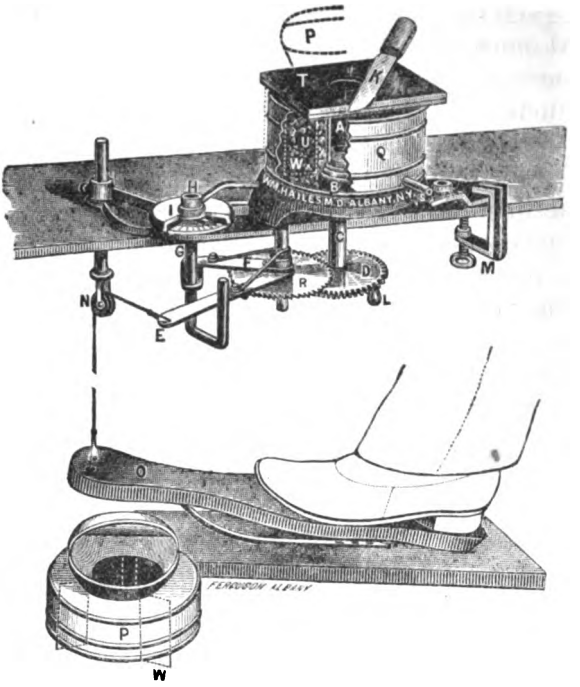

DESCRIPTION.

A, small well, tightly corked, fitting on pyramidal bed-plate. B, pyramidal bed-plate, containing different sizes. *C*, micrometer screw. *D*, cog-wheel fitting in pinion of ratchet-wheel *R*. *E*, lever actuating micrometer screw, by means of a pawl engaging in teeth of ratchet-wheel *R*. *F*, arm carrying a dog, which prevents back motion. *G*, regulator limiting throw of the lever, and consequently governing the micrometer screw. *H*, lever nut for fixing regulator. *I*, index with pointer and scale grade from 1-2400 to 1-800 of an inch. *K*, knife for cutting sections. *L*, knob to turn micrometer screw direct, when the ratchet wheel is pushed up out of gear. *T*, table of micrometer with glass top to facilitate cutting. *M*, Table clamp. *N*, pulley. *O*, treadle. *P*, hopper-lid with wings, *W*, to replace table, *T*, when freezing is to be done.

When a white, frozen film has formed at the periphery, introduce the specimen into the mucilage in the well of the microtome, holding it against the advancing film of ice until it becomes fixed in the desired position. Then pour in a little mucilage so as to cover it completely. Recork and stir, adding ice and salt as it becomes necessary until the specimen is *frozen solid.* It is advisable to turn the microtome screw occasionally, during the freezing, to prevent its becoming too firmly fixed to the sides of the cylinder.

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When perfectly frozen, exchange hopper lid for glass table (which has been previously cooled by contact with ice), then cut in the usual way, working the lever alternately with the cutting. The thickness of a section is controlled by the regulator as shown on the index-plate. The thickness most generally preferred is the $\frac{1}{1200}$ inch, ($\frac{1}{48}$ mm.) the most desirable range being from $\frac{1}{1000}$ of an inch, ($\frac{1}{40}$ mm.) to $\frac{1}{1600}$ of an inch, ($\frac{1}{64}$ mm.) The temperature at which the best results have been obtained has been when the surrounding atmosphere was about 40° Fah. It works satisfactorily at any season of the year, but requires more experience to work it perfectly in a warm atmosphere, owing to the rapid melting at the surface of the specimen. *All tissues must be frozen solid in order to be cut well.*

Two hundred sections have been successfully cut in a single minute, but a more moderate rate of speed of about a hundred per minute is recommended. If during the cutting the tissue should have become partially melted and softened, it must be refrozen; this is readily accomplished by disengaging the ratchet-wheel and pinion, by pushing it directly upwards out of gear. The plunger is made to descend rapidly by turning the micrometer screw directly by knob in cog-wheel. The specimen is then made to descend rapidly. Recork, replace the hopper-lid and stir for a few moments. When thoroughly refrozen the specimen can be returned to the top of the glass table with its relations unchanged, and the cutting may be continued as before. The sections, after remaining in water twenty-four hours, should be transferred to a mixture of equal parts of glycerine and water, with $\frac{1}{10}$ of one per cent. of carbolic acid, (boiled and filtered,) or kept indefinitely in alcohol. They remain unchanged for years. Perfectly fresh tissues may be cut without any previous preparation, using mucilage of gum acacia (B. P.) to freeze in. If preserved in alcohol, Müller's fluid, etc., it is necessary to wash for twelve hours in running water; then place in a solution of refined sugar in half its weight of water for twenty-four hours. Then remove to the mucilage of gum acacia (B. P.) for forty-eight hours, and cut in frozen mucilage as already described.

The knife employed is an ordinary strong-handled one, ground nearly flat on the under side, and of a very hard temper. It must be stropped frequently.

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XXI.—A REPORT OF SOME CASES OF GLAUCOMA IN WHICH AN IRIDECTOMY ON ONE EYE SEEMED TO PRECIPITATE AN ACUTE ATTACK OF GLAUCOMA IN THE OTHER.

Occurring in the Practice of C. R. AGNEW, M.D., and D. WEBSTER, M.D. Reported by D. WEBSTER, M.D., New York, N. Y.

Our remarks upon these cases will be brief, as the cases are more interesting and instructive in themselves than anything we can say about them.

That an operation for the relief of acute glaucoma in one eye may quickly be followed by an attack of the same disease in the other, is no new doctrine to the ophthalmic surgeon. Von Graefe, who first performed the operation of iridectomy for the cure of glaucoma, also first observed and described the complication of which we speak. In his experience, the fellow-eye was attacked within fourteen days after the operation on the first, in about thirty per cent. of the cases in which the operation was done for primary inflammatory glaucoma. The cases here related will show that it sometimes occurs after an operation for chronic glaucoma, or for painful glaucoma absolutum. In fact, we do not think it safe to operate upon one eye for glaucoma of any kind without previously warning the patient that the second eye may be attacked within a few days, or even a few hours, after the operation. The patient invariably attributes the attack in the second eye to the operation upon the first, and, if not informed beforehand of the possibility of its occurrence, will be very likely to blame the surgeon for withholding his knowledge of such liability.

We think it is now very generally conceded that the attack of acute glaucoma excited in the fellow-eye, in such cases, is not a true sympathetic inflammation. It is believed rather that anxiety of mind, the excitement attendant upon an operation, the hyperæmia of the eyeball, caused by the administration of ether, and the shutting up of the eye with a bandage, are sufficient to awaken an acute attack in an eye already predisposed to glaucoma. And we think it is fair to infer that an eye which has shown no glaucomatous symptoms, subjective or objective, *is predisposed* to the disease if the fellow-eye is so affected.

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In the majority of cases where the second eye is so attacked, we have found it necessary to operate upon it with as little delay as possible, and in all these cases we have obtained satisfactory final results. In some cases, however, it will yield to antiphlogistic treatment. We remember a case operated upon at the Manhattan Eye and Ear Hospital, but not reported here, where the attack in the fellow-eye passed off in a day or two, under the use of eserine, and did not return. In the ninth case here reported, the attack in the second eye passed off without an operation, under the use of opiates and iced cloths.

In all our later operations for glaucoma, we have left the fellow-eye unbandaged, and in none of the cases where we pursued this method have any symptoms of irritation in the second eye shown themselves. We have not followed this method in a sufficient number of cases to base an opinion upon, but we hope to find that the immediate attack upon the second eye will always thus be avoided.

Our *first* case is that of a married woman, forty years old, who came to us with a history of chronic glaucoma, in November, 1872. She had then R. V.=$\frac{20}{30}$, L. V.=$\frac{20}{40}$. Hm. $\frac{1}{30}$ each. T+? both. Ophth.: Vitreous hazy, retinal veins enlarged and pulsating, disk reddened, retina looking œdematous, and a commencing crescent of staphyloma posticum in both.

She was seen again in February following, when all the symptoms were improved, and she read $\frac{20}{30}$, with +$\frac{1}{18}$.

On February 20, however, we were sent for, and found the left eye in a condition of acute glaucoma, with sight reduced to a perception of light. Ether was at once administered, and a broad peripheral iridectomy done upwards by Dr. Agnew. On the evening of the next day the fellow-eye was found hard, red and painful. The pupil was dilated and the vision reduced to perception of light. Iced cloths were applied and anodynes administered, but, as the eye was no better the next morning, we again gave ether, and Dr. Agnew performed iridectomy on the second eye. From this time the recovery was good, and some months later the lady read fine print with each eye.

Our *second* case is that of a carpenter and builder, forty-eight years old, who gave the following striking history: About six months before consulting us he went to church one

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Sunday morning, seeing as well as ever, and was led out by his sister "stone blind." He does not remember having had any pain at the time. Since that time his left eye has become bloodshot and painful, with obscuration of vision about once a month, the vision remaining a little worse after each attack, until *now* it is reduced to perception of light. Eyeball hard, but not red or painful; pupil hazy, not dilated, but sluggish. Ophthalmoscope revealed only a slight reddish reflex from fundus, because of diffuse opacity of the vitreous and translucency of the cornea. R. V. $=\frac{20}{30}:\frac{20}{20}$ with $+\frac{1}{48}$.

October 26. Iridectomy by Dr. Agnew on left eye.

The next morning there was a slight dull pain in the right eye. Two days after the operation, the right eye was red, pupil dilated, and vision reduced to counting fingers at four feet (1.22 m.)

On the third day after the operation on the left eye, an examination having shown that the acute glaucoma in the right was growing worse in spite of treatment, we placed the patient again under ether, and Dr. Agnew performed an iridectomy upon the right eye. The recovery was smooth.

In March, 1875, five months after the operations, R. V. $=\frac{20}{20}$ with $+\frac{1}{48}$ c. ax. 10°, and visual field normal. L. V.= counts fingers in a small field.

Our *third* case is that of a female nurse, sixty-eight years of age, with painful glaucoma absolutum of right eye, and chronic glaucoma of left. L. V$=\frac{20}{50}$; no improvement with glasses. Visual field less than one-fourth its normal size. Tension normal, but glaucomatous excavation of disk.

January 12, 1874. Iridectomy upon right eye, by Dr. Agnew, for relief of pain.

January 14. The fellow-eye has been injected, lachrymose, and somewhat painful since the morning following the operation. Anterior chamber shallow, tension increased, vision cloudy. Dr. Agnew now performed an iridectomy on the second eye, and both recovered kindly.

In March, 1878, more than four years after the operations, the patient returned, complaining that the use of the left eye, which had now vision $\frac{20}{30}$, produced pain in the blind right eye, which was then enucleated with entire relief to the patient.

Our *fourth* case is that of a carpenter, forty-eight years old, upon whose left eye iridectomy was performed by Dr. Agnew,

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for glaucoma simplex, on October 1, 1873. The same night he complained of sharp, shooting pains in the eye operated upon, which were relieved by a hypodermic injection.

On the *third* day after the operation, the *right* eye became red, painful and lachrymose, and vision was reduced from $\frac{20}{40}$ to counting fingers at two feet (0.6 m.) Two leeches were applied to the temple, and atropia and iced cloths used. More or less improvement resulted, and the eye was kept under observation, and treated according to indications until the *eighth* day after the operation on its fellow, when the sight being still reduced to ability to count fingers, it was thought best to perform an iridectomy upon it also, which was accordingly done by Dr. Agnew. Both eyes recovered well after this.

Our *fifth* case was that of a married woman, fifty-two years old, whose father had been blind for fifteen years with glaucoma absolutum. She had a history of chronic glaucoma extending back over several years, and latterly of acute exacerbations in the right eye.

R. V. = $\frac{20}{200}$: no improvement with glasses.

L. V. = $\frac{20}{100}$: $\frac{20}{20}$ with $+\frac{1}{24}$.

Ophthalmoscope showed left fundus and media normal; right, dotted and diffuse opacity of the cornea, more dense towards the center, and shading off towards the periphery. An iridectomy was done upon the right eye by Dr. Webster, June 27, 1877, in the afternoon. The next morning, on removing the bandage, the left eye was found to be slightly injected, the iris bulging forwards, the pupil slightly enlarged and sluggish, and the vision misty; iced cloths were applied.

In the evening, the left eye was found a little worse in every way, and beginning to be painful. Codeia was ordered to relieve the pain.

In the morning of the second day after the operation, the eye seemed to be better. In the evening the patient counted fingers with each eye by candle-light, but more distinctly with the operated eye than the other.

The next morning, the *third* after the operation, there was no pain in the eye, but as the sight remained very much blurred, and all the symptoms of acute glaucoma persisted, we made arrangements to operate in the afternoon.

When we went prepared to operate at 4 P. M., we found the lady suffering from the most intense pain in the second eye.

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This pain had come on suddenly, about an hour before, and the patient described the feeling as that of a sharp knife being constantly thrust around the back of the eyeball. She declared she would rather have the eye taken out than to submit to the excruciating pain any longer. Upon separating the lids a large quantity of hot tears burst forth, the eyeball was found intensely congested, and there were many ecchymotic spots in or beneath the ocular conjunctiva.

The cornea was so cloudy that it was with some difficulty that the dilated pupil could be seen; the hardness of the eyeball was very marked, and the vision was only perception of light.

An iridectomy was at once done, under ether, by Dr. Webster. Six weeks after the operations

R. V. = $\frac{20}{30}$ with + $\frac{1}{36}$ c. ax. 180°.

L. V. = $\frac{20}{20}$ with + $\frac{1}{48}$ c. ax. 180°.

She has had no recurrence of the disease, more than four years having elapsed since the iridectomies.

Our *sixth* case is that of a married woman, sixty-three years of age, the subject of goitre, with a history of chronic glaucoma of the left eye, with acute exacerbations.

R. V. = $\frac{20}{60}$: $\frac{20}{30}$ with + $\frac{1}{24}$. Field and ophthalmoscopic appearances normal.

L. V. = $\frac{20}{200}$; no improvement with glasses. Field contracted to a diameter of *one inch* (25 mm.) at a distance of *one foot* (300 mm.) Pupil enlarged and fixed; tension +; ciliary veins engorged; shallow anterior chamber.

Ophthalmoscope showed slight diffuse corneal opacity, extensive cupping of disk, with exposure of cribriform fascia.

A drop of a four-grain (1 p. c.) solution of eserine was put into the left eye, which caused a twitching sensation in and about the eye.

The next day the patient reported that the eserine caused pain for an hour or two, but did not improve the sight, and as we found the condition of the eye the same, we placed her under ether, and Dr. Agnew performed an iridectomy upon the eye.

When the eyes were opened on the morning of the *second* day after the operation, neuralgia over the right eye was just commencing. The pain increased in severity and kept her awake all night, although she took a grain (6 cgms.) of codeia.

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In the morning of the *third* day, eyeball red, pupil dilated and fixed, anterior chamber shallow, tension increased, corneal haziness, vision of fingers at three feet (900 mm.)

An iridectomy was done upon the eye, at 2 P. M., by Dr. Agnew, after which the patient slowly recovered. Six weeks later:

R. V. = $\frac{2}{3}^{0}$ with + $\frac{1}{30}$c. ax. 180°c. — $\frac{1}{60}$c. ax. 90°.

L. V. = $\frac{20}{100}$; no improvement with glasses.

Our *seventh* case is that of a maiden lady, forty-five years old, who had suffered from weak eyes since measles at fifteen. For five years she had been subject to attacks of neuralgia of the head, occasionally shooting into the right eye. For the last three years the sight of the right had been impaired, but the patient believed she could read with it up to the day before we saw her. She had never tried it separately, however. The eye grew red and painful the day before she consulted us, and she was kept awake all night by the pain. When we first saw her the lids of her right eye were slightly swollen, the eyeball red and watery, the pupil dilated and fixed, the anterior chamber shallow, the tension increased.

R. V. = $\frac{10}{200}$: $\frac{20}{70}$ with + $\frac{1}{10}$; field contracted.

L. V. = $\frac{15}{200}$: $\frac{20}{30}$ with + $\frac{1}{7}$; field normal.

Ophthalmoscope showed in the left eye no lesion; in the right a diffuse opacity of cornea, which interferes with examination; but a cupped disk, surrounded by a broad whitish ring, can be discerned.

The right eye being very painful, we dropped into it some of a four-grain solution (1 p. c.) solution of eserine. An hour and a half later the eye felt much better. The patient was furnished with some of the same solution to drop into the eye twice daily.

Two days later, the patient reported that the eserine so relieved the pain that she had slept well both nights, but the vision was unimproved.

The next day, as the pupil remained dilated and immovable, and the vision unimproved, the patient was placed under ether, and an iridectomy done upon the eye by Dr. Agnew.

On the sixteenth day after the operation, it was noted that the eye had steadily improved, and that the sight had risen to $\frac{20}{70}$ with + $\frac{1}{3}$. Seven weeks after the operation, as the fellow-eye was red and irritable, atropia was dropped into it,

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and adhesions of the pupillary border of the iris to the anterior capsule of the lens were discovered. Atropia was then used, *coup sur coup*. Two days later the adhesions had been broken up, and the eye was feeling comfortable. The atropia was stopped.

Ten days later, or about the end of the ninth week after the operation on the first eye, the patient came to us with well-pronounced acute glaucoma in the other. The first eye was looking well. Ether was now given, and an iridectomy done upon the second eye by Dr. Agnew. Ten days later R. V. $=\frac{20}{30}$ with $+\frac{1}{9}$, L. V. $\frac{20}{40}$ with $+\frac{1}{9}$. The eyes gave no further trouble.

Our *eighth* case is that of a married woman, twenty-six years old, who one evening had pain in her right eye before going to bed. There was also some obscuration of vision, but the next morning the pain had passed off, and the sight seemed as good as ever.

Similar attacks occurred several times, when, becoming alarmed, she consulted an ophthalmic surgeon, who performed an iridectomy upwards upon the affected eye.

Inflammation, with loss of vision, set in on the *second* day, and on the *third* acute glaucoma attacked the fellow-eye. She presented herself at the Manhattan Eye and Ear Hospital one week later, when her condition was as follows:

Right eye red and painful; lens opaque and swollen; no anterior chamber; tension much increased; vision reduced to perception of light. Left eye red and painful; tension increased; very shallow anterior chamber; pupil so widely dilated that only a very narrow rim of iris could be seen, this rim being a little broader below than elsewhere. Opacity of the media prevented the fundus from being seen. Vision of fingers at nine feet (2.75 m.)

Ether was given, and, Dr. Agnew operating, a circular disk of the right cornea was removed by means of Bowman's smaller trephine. A portion of the swollen lens matter escaped through the opening.

An irridectomy downwards was done on the left eye at the same sitting, and in order to keep up the drainage from the eye for a longer period, a small piece of cornea was snipped away with the scissors at one extremity of the wound. Both eyes recovered kindly.

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Eleven months later it was noted: Right pupil closed by a dense membrane, perception of light, but very imperfect projection.

L. V. = $\frac{20}{40}$ with + $\frac{1}{12}$ s. c. + $\frac{1}{48}$ c. ax. 180°. No cupping of optic disk.

The patient was examined two years later and the condition was found unchanged.

Our *ninth* and last case is that of a woman, forty-five years old, who, upon consulting us in September, 1876, stated that she had suffered from very severe pain over the right eye for six weeks. The pain had generally been worse at night, and had grown much worse in the last two weeks.

Eye red, vision of fingers at one foot, (0.3 m.) pupil widely dilated, anterior chamber shallow, tension increased.

Ophthalmoscope showed only a faint reflex from the fundus. L. V. = $\frac{20}{30}$; sufficient old corneal opacity to account for the lowering of vision.

September 8. Iridectomy upon right eye by Dr. Webster; slight hemorrhage into pupil. No atropia used.

The next morning the blood had been absorbed from the anterior chamber, which was again filled with aqueous humor. There had been no pain since the operation. In the evening the fellow-eye became red and watery and slightly painful. The pupil was moderately dilated, and sluggish, and the vision was blurred.

An opiate was given, and iced cloths were applied through the night, except during sleep.

The next morning the glaucomatous symptoms had entirely disappeared, and the vision was again $\frac{20}{30}$.

Two years later we saw the patient again. Both eyes had remained well.

R. V. = $\frac{20}{100}$ with $-\frac{1}{24}$.

L. V. = $\frac{20}{30}$: E.

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XXII.—A FEW ORIGINAL THOUGHTS ON CHOLERA.

By H. RAYMOND ROGERS, M. D., Dunkirk, N. Y.

Few among the active members of the medical profession at the present time know by actual experience what a cholera epidemic signifies. Such an experience alone can make us realize its grave character and disastrous consequences. It is well for us to consider the horrible pictures left us from the memorable epidemic of 1832. The lapse of an intervening half century should not make us forget the utter *impotency* of all measures then employed in its treatment; neither should we ignore the fact that science has since interposed no new barriers thereto. Let us not ignore the probability that a similar epidemic to-day would ravage more frightfully still, being intensified and multiplied by the increased population.

The average mortality of 50 per cent. of all who are attacked by this disease may well force us to serious reflection. The unprotected condition of our fellow human creatures, and the fact that no treatment at all, and every form of treatment as well, give precisely the same result, should set us to pondering. The considerations, and the possibility of a crushing, paralyzing blow to the business of the whole country, with its attendant miseries, should act as a constant stimulus to efforts on the part of our whole profession for the discovery of some practical philosophy of the disease, and a consequent more largely successful treatment. History may soon repeat itself unless speedily there be a dissemination of greater light on the subject. This is simply the statement of grave facts.

In view of such facts, we are justified in ignoring all existing theories regarding the nature of this disease and all methods hitherto employed in its treatment, founded upon such theories. Only through investigation in a new field, and through observation from a different standpoint, may we expect to find a rational and satisfactory philosophy.

For the present let us study *ab origine* the inherent character and mode of action of this formidable disease, leaving behind every conception appertaining to old theories and methods. The demand is for a new philosophy that shall take into account all the phenomena, and constitute an *exact science* of the disease. Briefly, the demand is for a new foundation.

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As our answer to this demand, we submit the theory that cholera is a true neurosis;—*that it consists essentially in a general disturbance of innervation.* And we shall now proceed to summon in proof thereof, first, the prominent symptoms of this disease; and second, the fact that its treatment, when conducted according to this theory, is singularly successful.

(1.) A characteristic malaise, sense of weakness, and tendency to nausea usually precede an active attack of this disease. These conditions show that a pervasive influence is being expended upon the nervous system. The producing cause varies remarkably in the degree of its exhibition. It may make its invasion and expend itself upon the brain and nervous system with a suddenness and a power which destroys the life, even, before other symptoms can intervene; sometimes within the space of twenty or thirty minutes. Thus these initial conditions, whether mild or fatal, support the theory of a disturbed innervation.

(2.) The rice-water evacuations demonstrate the presence of this disease. A right interpretation of this rice-water phenomenon is the KEY to the whole subject of cholera.

The great life-current is robbed to supply these discharges; and the intestines, the stomach and the skin, are but mechanical channels through which the abstraction takes place. The process of transudation into these channels constitutes as true a *depletion*, as real a *hemorrhage*, as that which takes place in abortion. By what process, therefore, may such a flood be thus rapidly separated from the vital circulating current? Certainly not by any intrinsic change in the composition of the blood itself, as that would result in the sudden extinction of life. Not by reason of any spontaneous separation of its thicker and thinner elements, followed by the expulsion of the latter, as no fluid however attenuated can make its way through the walls of the blood-vessels while the tissues composing those walls remain in a normal condition. We are thus forced to the conclusion that the pathological changes which render those exudations possible must be sought for only in a change in the tissues which constitute the walls of the vessels which convey the blood,—a relaxation which *permits* transudation.

In this patulous condition of the walls of the blood-vessels

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which permits the rapid exosmosis into the cavity of the stomach and intestines, (and outwardly through the excerning vessels), we find a clear and positive indication of the true character of the disease. This action could by no possibility take place if the nerves which supply the walls of the blood-vessels preserved their integrity. Thus the great current through which the life ebbs away has its source in a disturbed innervation.

(3.) The cramps arise from purely nervous causes.

(4.) The vomiting is simply regurgitative and neurotic.

In further confirmation we have the strong negative evidence furnished by cadaveric autopsy. No conditions of organs, or tissues, have been discovered in the whole number of examinations which disprove the theory. After death, no constant and uniform changes are discoverable which can be regarded either as the cause, or the products, of the disease, other than such as may be due to hemorrhage.

The condition, or symptom, therefore, which in this disease is of paramount importance in revealing its true character, and in furnishing correct indications for its treatment, is that of *actual hemorrhage*. In all our theories, and in our practice, we have heretofore ignored this great fundamental fact.

The rice-water evacuations are also pathognomonic ;—they may be found in no other disease known to man. It is conceded that this sudden and exhaustive drain takes place at the expense of the vital circulating current. It tells its own story. Deprived of its serous elements, the blood is rendered black, thick and viscid, and circulates with difficulty through the vessels. It loses its capacity for absorbing oxygen, and, no longer changing from venous to arterial, ceases to support the temperature of the body, or to stimulate the heart to contraction. Hence the failing circulation, the stagnation in the capillaries, the blue skin, the feeble and hurried respiration, and the unusual coldness. If the red flowing current were drawn directly from its natural channels, the effect would not be different except in degree.

If my theory of the nature and pathology of cholera be true, it must in due time be enrolled in the department of *exact science* in medicine. And, among the direct consequences, will be a rational method of treatment, with vastly improved results.

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The course which should be pursued in the treatment of this disease need no longer be regarded as a matter of question or doubt. If we look upon *cholera-hemorrhage* as subject to the same general principles of treatment as other hemorrhages are, the question would become a simple one.

The indication which is most fundamental, is the preservation of the integrity of the brain. Fatal results are due to its derangement, or loss of function.

The most insidious, and consequently the most dangerous element in this disease is *concealed* hemorrhage. This hemorrhage is present, though unseen, from the first symptoms that indicate the presence of cholera. How serious an element it is, may be discerned from the consideration of how small a quantity of blood, rapidly abstracted, may produce syncope and death.

The existence of the purely serous effusion is not positively shown until the fecal contents of the intestines are carried away;—though already there may have been dejections almost wholly constituted of serum. Hardened fecal matters sometimes obstruct the rectum, and the bowels become filled with serum, and death ensues, before catharsis is reached. The probability of concealed hemorrhage should therefore be kept prominently before the mind, and every precaution taken against its consequences. The most important measure which can be directed to this end is the enforcement of the horizontal position. The gravitation of the blood from the head is thus in a large degree prevented, and fatal tendencies averted. Where the evacuations have been copious, and collapse is either present, or imminent, the body should be kept inclined, that the brain may be re-supplied by gravitation.

The contents of the intestines being liquid, act upon the *sphincter ani* by gravitation and thus provoke catharsis;—this condition necessitates the horizontal position. The liquid contents, if retained within the intestines by position, act by their presence as a *vis inertiæ*, and hold back the advancing current. The erect position, or sitting up in bed, even, is often followed by fatal syncope.

In the way of remedial agents, little is required in this disease. When we consider that the principal function of the mucous membrane lining the *primæ viæ* is reversed,—that

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throughout its whole extent *exosmosis* takes the place of *endosmosis*, we see the futility of administering remedies by the mouth. When thus given they are nearly or quite useless, or absolutely dangerous. If powerful, they may, if retained, become cumulative, and, in the event of reaction, they become necessarily fatal. Many sad instances of death from this cause have been more than suspected. A class of remedies may be employed with some advantage internally, viz.: such as leave a decided impression even though promptly ejected; among which are capsicum, camphor, ammonia, etc.

During an epidemic it is hazardous to rely upon remedies given by the mouth. Mild cases, such as of supposed cholerine, for which a gentle opiate treatment is usually sufficient, often suddenly develop into the most rapid and dangerous proportions.

The treatment *par excellence* in this disease is found in the hypodermic use of morphia. This drug has a most satisfactory action when thus administered. Its effects are prompt and certain. It changes the perturbed condition of the nervous system, and closes up the diminutive avenues through which the life ebbs away.

The dose should be small and *not* frequently repeated. The quarter of a grain should rarely be exceeded. In collapse this is contra-indicated. Prompt and vigorous measures should be employed externally for restoring the circulation in the extremities. Ice should be given *ad libitum* to relieve the excessive thirst. If ice cannot be obtained, the coldest water may be given in small quantities, and frequently repeated. The suffering from this cause is inconceivably great, and it is *unjustifiable cruelty* to deprive patients of these necessaries.

If appliances for the introduction of morphia hypodermically are not at hand, there are other known processes by which it may be introduced beneath the cuticle. Absorption is rapid when it is placed upon a blistered surface.

The public mind should be impressed with the fact that, in the absence of a physician, the proper thing to do is to place the patient in a horizontal position, or, if the case be severe, with the body more or less inclined, with the head the lowest. The position should be strictly preserved until relief is assured. Position, and small doses of a preparation composed of equal parts of the tinctures of opium, capsicum, camphor and of

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chloroform, occasionally repeated, will ensure satisfactory results in many cases which might otherwise prove fatal.

Other requirements for treatment may be met upon general principles.

The hypodermic method, wherever employed, is spoken of in unqualified terms of confidence and satisfaction. The reports of cases thus treated in Asia, Australia, Europe and in various parts of our own country, show almost uniformly favorable results. My personal experience in the treatment of cholera upon the basis described, includes twelve cases, that were grave and typical. In each of these cases the result was all that could be desired. A single case will illustrate the treatment pursued.

Mr. F., night-watchman, was well at eleven o'clock P. M., and at five o'clock A. M. was with difficulty able to reach his home, but a few blocks distant. A few minutes subsequently his condition was as follows: Pulse only perceptible, voice husky, features pinched and blue, eyes sunken, extremities cold, cramps severe and thirst intense. The rice-water evacuations amounted to nearly three quarts within the space of thirty minutes. His condition was such that morphia could not then be employed with safety. This tendency to collapse was so great that the first duty was to stimulate the brain and heart to increased action, by sending to those organs a current of blood by gravitation. The body was quickly inclined with the head placed considerably lower than the feet. External measures were employed and ice given freely. The cramps being excessive, chloroform was administered to the extent of producing sleep. After nearly an hour had elapsed the heart manifested returning strength, and one-quarter of a grain of acetate of morphia was hypodermically administered. This remedy was repeated at long intervals, and in lessened quantities. Special care was taken to preserve the horizontal position until reaction was established. The result was satisfactory.

The confidence which attends the practical application of this theory is in strange contrast with the terrible weight of doubt and anxiety which necessarily accompanied the old processes. The latter experience can never be forgotten by those who treated this disease in its earlier epidemics.

The foregoing theory of the intimate nature and pathology

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of cholera, and the methods, and the results of treatment are placed before the members of this Society for their profound consideration, with the hope and confident expectation that it may no longer be classed among the *scourges* which from time to time spread with fatal consequences over the face of the earth.

XXIII.—Internal Œsophagotomy. The Division of Membranous or Cicatricial Constrictions or Obstructions in the Œsophagus by Internal Section.

By J. O. Roe, M.D., Rochester, N. Y., Fellow of the American Laryngological Association, Member of the American Medical Association, etc.

The few operations of internal œsophagotomy that have been performed have given results that are very gratifying when compared with the unsatisfactory results in most cases of dilatation, as well as of external œsophagotomy and gastrotomy, and notwithstanding accidental complications which sometimes unavoidably arise, the operation must take its deserved place among the operations on the œsophagus.

The collected statistics show that it has been performed fourteen times. Eight times in France—first by Maisonneuve, 3 times; afterwards by Lanelongue, 1; Dolbeau, 2; Trélat, 1; Tillaux, 1. Three times in Germany—Schiltz, 2; Czerny, 1. Once in Denmark, by Studsgaard; once in England, by Mackenzie (case yet unpublished) and once in the United States by the writer, in the case that is about to be detailed to you.

Mrs. F. C. Robinson, of Spencerport, N. Y., aged 24 years, the wife of a druggist, was brought to me by Dr. P. G. Udell, her family physician, Oct. 27, 1881, for consultation concerning a stricture of the œsophagus from which she was suffering.

The cause of the stricture is unknown.

She first felt an uncomfortable sensation or obstruction in the lower part of her throat in Feb. 1874, after a violent paroxysm of laughter, but at that time had no difficulty in deglutition.

The dysphagia occurred quite suddenly one day during the following June.

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She first experienced difficulty in swallowing liquids and solids; semi-solids could be swallowed more readily. Soon it became almost impossible for her to swallow any substance but chocolate. This she could get down very slowly, and on this she sustained herself, though in quite a weakened condition. All solids and all other liquids would be returned shortly after they were taken.

In January, 1878, a severe form of stomach trouble came on, attended with vomiting of more or less blood, due, it was thought, to ulcer of the stomach. Soon it became impossible for her to swallow any substance whatever, necessitating the employment of nutritive enemata to sustain her. This condition continued until the following June, when she was again able to resume her chocolate.

At the beginning of the difficulty, all substances which she could not swallow would be returned at once, but after a time they began to be regurgitated less quickly until she could take half a glass of water or other substance and retain it for several minutes. This indicated the formation of a sac above the stricture, and from the walls of this sac undoubtedly much nutriment was absorbed, chocolate being the only substance which appeared to pass into the stomach, though very slowly and with difficulty. This condition continued until she passed to the care of Dr. Udell, May, 1882, who diagnosticated stricture of the œsophagus.

I should remark here that no previous diagnosis of stricture of the œsophagus had been made. The apparent gastric irritation was ascribed to indigestion or dyspepsia, hysteria, gastric ulcer, etc.

Dr. Udell at once began systematic dilatation of the stricture with flexible conical œsophageal bougies and pursued it assiduously, but with very discouraging results. The tissue composing the stricture seemed to be of an elastic character, so that no matter how widely the opening was dilated it would return again almost immediately to its previous calibre, and no improvement in swallowing would follow.

On exploration with a bulbous sound, the stricture was found to be in the superior portion of the tube about three inches (75 mm.) below its upper orifice.

It was about half an inch (13 mm.) in extent, evidently a ring of elastic tissue. The opening was so small that only one of

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the smallest olive points (4 mm. in diam.) could be passed without using considerable force.

Just above the stricture, on the left side of the œsophagus, was found a sacculated dilatation, into which the sound readily slipped, if it was not strongly directed towards the right side.

I advised Dr. Udell that this was a case very favorable for the operation of internal œsophagotomy. Accordingly, at the request of the patient, the operation was decided on.

Fig. 1.
Internal Œsophagotome, after Mackenzie.

Through the kindness of Dr. Morell Mackenzie, I procured of Mayer & Meltzer, London, an internal œsophagotome, devised by Dr. Mackenzie, having but a single cutting blade, as shown in fig. 1. The shaft of the instrument is 15 inches (381 mm.) long, made of gum elastic and flexible, through the center of which runs the stem which is attached to the blade at the lower end of the instrument. This when introduced, is concealed in the metallic shield, which is firmly attached to the lower end of the shaft; the distance which the blade is thrown out is regulated as desired by a screw in the handle.

Dec. 7, 1881, I divided the stricture by making a single incision through the posterior side. I was at once able to pass very easily a bulbous bougie No. 18, English scale.

There was very little hemorrhage at the time, but some slight bleeding followed during the afternoon, and clots of blood were vomited.

The pain from the operation was very slight. The sensation, the patient said, was like a sharp sting or the scratch of a pin.

The patient was ordered to abstain from taking any food by the mouth for two days in order to exclude the irritation which the passage of the food and debris lodging in the wound might cause.

She returned to her home, and the next day after the oper-

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ation Dr. Udell began the use of bougies to keep the opening free and to prevent the re-contraction of the stricture.

For a day or two after the operation she suffered considerable pain in the chest and in the region of the stricture, and some soreness followed for three or four days on the introduction of the dilating bougies.

On the fifth day after the operation, I received a note from Dr. Udell, stating that the patient was doing finely, and that he had passed the third sized bougie without difficulty. Liquid food passed readily into the stomach and was retained, a thing that had not occurred before in seven and a half years.

The stricture was then dilated three and four times each day with No. 2, the next to the largest size of the bulbous bougies, but, notwithstanding this, after a time the stricture began to re-contract, and it became difficult to pass the No. 2 bougie, which had passed easily, and swallowing of liquids became more difficult.

Accordingly, Jan. 6, 1882, I repeated the operation, making two incisions, one in each side laterally, but not quite as deep as the previous incision.

There was no hemorrhage of consequence this time, and but very little pain or soreness followed on passing the dilators.

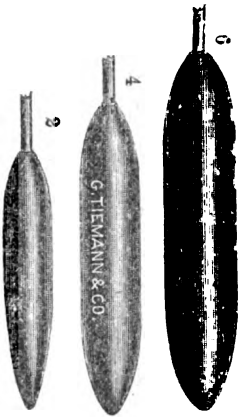

Fig. 2.
Cylindrical Œsophageal Dilators.

The stricture now appeared to yield entirely, and in three or four days it was dilated to the full size of the normal calibre of the œsophagus without difficulty, and the patient began to take solid food.

At the time of the second operation I became convinced of the inefficiency of the ordinary bulbous bougies for dilating purposes. In addition to this, difficulty is often encountered in withdrawing them after they have passed the stricture, because of their shape, being like an egg, conical at the distal end and quite blunt at the posterior end.

I therefore had some dilators made in six different graduated sizes, of hard rubber, cylindrical, tapering at both ends alike, and securely fastened to a whalebone stem. (See fig. 2.)

These I found to be an admirable improvement, as they could now be held in the stricture for a short time at each in-

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troduction, giving the benefit of pressure, though for only a short period each time, with the advantage of which, in overcoming such conditions, all are familiar.

The tolerance of these bougies by the œsophagus gradually increased, although their pressure against the larynx interfered somewhat with respiration and prevented their long retention within the stricture. The same sized conical rubber dilator of Wales, or those of gum elastic, caused so much obstruction to respiration, by closing the laryngeal opening, as to necessitate their withdrawal at once.

With a stricture in the lower or middle portion of the œsophagus, this obstruction to respiration would not be encountered, and the instrument could soon be retained for a considerable length of time.

The tolerance of an instrument by the œsophagus is shown by Krishaber (1) in cases of diseases of the œsophagus, where a stomach or feeding tube was retained continuously in different cases from 46 to 365 days.

This plan of keeping the opening free and preventing a reunion of the cut surface has worked admirably, as there is now no perceptible tendency to reclosure or narrowing of the passage, and the patient takes all kinds of food freely.

At first considerable food would lodge in the sac, and when this was full it would be regurgitated, as before the operation, giving the appearance of vomiting from gastric irritation; but now the sac is gradually decreasing in size, and there is a corresponding decrease in this vomiting.

The last operation previous to the one just reported was done by Dr. Morell Mackenzie, of London, July 12th, 1881.

Though not as yet published, I am able through his courtesy to present the record of the case as reported by him to the International Medical Congress, London, before the Laryngological Section, Aug. 4th, 1881.

On account of its exceeding interest, though terminating unfavorably, I present it entire.

"Henry Alexander, aged 36, ship-rigger, while engaged at work, Sept. 17, 1880, drank, in mistake for water, some of a clear solution of potash (used for removing paint, etc.)

"He was at once admitted into the London Hospital.

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(1) De la sonde œsophagienne a demeure. Ann. des Mal. de l'oreille, du larynx. Paris, Nov., 1881, p. 265.

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"For three weeks he had ice to suck and was fed by nutritive enemata. At the end of nine weeks a fine bougie (No. 1 or 2) was passed; after the lapse of thirteen weeks, with progressive dilatation of the stricture he was enabled to eat fish.

"About the middle of February, 1881, he somehow caught small pox, and was transferred from the London to the Small Pox Hospital, where he remained under treatment for four weeks, during which time no special attention was directed to the throat.

"On convalescence he returned as an out-patient to the London Hospital, but by that time had retrogressed in regard to swallowing, being able only to take jelly.

"He was admitted into the Throat Hospital, April 7th, 1881, in a very debilitated condition.

"At about the beginning of May—after use of ice—No. 4 bougie was passed; the stricture was found to commence at a level rather below the cricoid cartilage, the bougie then passing through a slightly tortuous track deviating from right to left.

"Progressive dilatation was made so that by June 2d a No. 8 could be got through the stricture; from this time progress became increasingly difficult—a graduated bougie was used—but by July 8th an advance of one size only had been made.

"Internal œsophagotomy was performed by Dr. Mackenzie on July 12th, the stricture being divided from below upwards in middle line behind.

"No anæsthetic was administered.

"No. 14 bougie was passed without difficulty a few hours afterwards.

"There was little pain after the operation, but this increased considerably towards the evening; it was referred to the stomach and to the back, and became severe enough to need a hypodermic injection of morphine to relieve it.

"On auscultation of the region to which pain was referred in the back, (corresponding to the base of the right lung,) fine crepitation on expiration and inspiration with diminished breath sounds was found.

"Temperature 100; respiration 40.

"July 13. Patient complains of very sharp pain on swallowing; crepitation extending from right base to angle of scapula; diminished percussion resonance at lower part; slight colorless viscid expectoration.

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"During the next few days the pulmonary signs became more marked, expectoration more profuse but retaining the same character.

"Patient has milk, eggs, beef tea, and port (3 oz.), taking these well; some diarrhœa. Pains in stomach and right side more or less constant, increasing towards evening; obvious dyspnœa on slight exertion; spongio-piline sprinkled with spts. tereb. for relief of pain, together with hypodermic injection occasionally at night.

"July 22. General condition fairly good; bougies 7, 8 and 9 passed.

"July 23. 8, 9 and 10 passed. An expectorant mixture ordered; on successive days bougies were passed similarly progressive in size.

"Aug. 1st. No. 15 passed easily; pain as before, but coming on only towards evening; less expectoration; crepitation still audible at right base.

"Temperature from time of operation has averaged in the evening a little above 101° and in the morning a little below 100°."

The patient died in the London Hospital about the middle of October.

"Post-mortem.—Both lungs were found considerably congested and presented patches of pneumonia.

"The right pleural cavity contained a large quantity of seropurulent fluid.

"Commencing about one inch below the cricoid cartilage and extending downwards for three inches, the walls of the œsophagus were found to be slightly thickened, hard and uneven on the inner surface, the lumen of the gullet being considerably narrowed for that extent.

"At the lower part of the stricture an incision of about an inch long, was found extending through all the coats of the tube below, and through the mucous and part of the muscular tunic, for the upper half of its length.

"The wound showed but little sign of cicatrization."

The unfortunate termination of this case Dr. Mackenzie largely attributes to the patient's being a confirmed drunkard, as it was found impossible to keep him from taking spirits in large quantities.

Considering the slight attention to which the operation of

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internal œsophagotomy has received at the hands of our surgical authors, and the absence of a report of them in English that I am aware of, a brief review of all the cases in which the operation has been performed cannot but be of interest as well as profit. For, by studying its past record, its successes and failures, we can judge correctly and without prejudice its merits and demerits. Facts rather than theories should govern our judgment.

CASE 1st.—By Maisonneuve. A young girl in a fit of despair swallowed a quantity of sulphuric acid, causing a stricture of the œsophagus in the vicinity of the cardia, 3 cm. long. Swallowing became almost impossible. July 16, 1861, the stricture was successfully divided from above downwards. No pain or hemorrhage from the operation. After the operation swallowing of meats, etc., was easy.

Patient died of sub-acute peritonitis 15 days after the operation.

CASE 2d.—By Maisonneuve. That of a young woman, stricture just below the thyroid cartilage, caused by tuberculous infiltration. July 20, 1861, stricture successfully divided from above downward. Swallowing rendered free. Died of peritonitis 12 days afterwards.

Autopsy in both cases showed no connection between the operation in the œsophagus and the peritonitis. In the œsophagus, in both cases, the clean cut of the incision was found, which touched nothing but the diseased tissue of the stricture, and that was but incompletely severed. The cellular tissue in the vicinity was completely intact, with no trace of inflammation or morbid processes whatever. No lesions of the stomach, but an intense peritonitis, the origin and cause of which remained unknown, though the cause seemed to be in the pelvis.

CASE 3d.—By Maisonneuve. In a man 58 years old, who had had difficulty in swallowing for two years. Cause of stricture unknown. Located at junction of upper third and middle of œsophagus.

April 3d, the stricture was successfully divided from above downwards. Pain and hemorrhage slight. Deglutition rendered free. Patient discharged cured.[1]

[1]For report of the above three cases *vide* Maisonneuve, J. G.: Clinique chirurgicale, Paris, 1864.. Tome II, p. 410, *et seq.*

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A fourth case of stricture of the œsophagus is reported by Lanelongue to have been given by Maisonneuve, in connection with the above three cases; but on examination of Maisonneuve's original article, the case is not to be found reported there. As the case is undoubtedly authentic and the reference wrong, I will cite it from Lanelongue.[1] It is to be excluded, however, from the operations of internal œsophagotomy, as the operation was only attempted but never performed.

A man, 57 years old, with cancerous stricture near the cardia.

The operation of internal section was proposed, but on failing to introduce the œsophagotome through the stricture it was abandoned. Afterwards the œsophagus was ruptured by a sound, on attempting to introduce it through the stricture, May 20, 1865, and the patient died next day.

Case 4th.—By Lanelongue.[2] That of a man 23 years old, caused by drinking sulphuric acid eleven years before.

Dysphagia soon followed the taking of the acid, but was relieved by the sound, the use of which was continued for a time. The patient was then advised to continue its use himself, but he soon abandoned it, and after a period the stricture returned.

Progressive dilation failing to give relief, internal œsophagotomy was performed Nov. 8th, 1864. The incision was made from above downward. Painless and bloodless. Deglution rendered free. Remained cured one year afterward, when last seen.

Case 5th.—By Dolbeau. In a young girl, who, 18 months before, in October, 1868, attempted to commit suicide by swallowing sulphuric acid.

Dysphagia extreme, could only swallow broth.

Progressive dilatation failed, and internal œsophagotomy was performed. Operation painless and bloodless. Subsequent dilatation rendered deglution normal.

Case 6th.—By Dolbeau.

In 1869 Dolbeau had another case of stricture of the œsophagus, caused also by swallowing sulphuric acid.

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[1] Observation avec quelques considérations pour servir a l'histoire de l'œsophagotomie interne. Mémoires de la société de chirurgie de Paris, 1865. Tome VI, p. 547.

[2] Lanelongue, Loc. cit. p. 548.

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Dilatation failed and internal œsophagotomy was performed. No pain or hemorrhage.

By subsequent dilatation of the stricture complete alimentation was restored. Dismissed cured.

The above two cases were reported to the Société Imperiale de Chirurgie, March 16th, 1870.[1]

CASE 7th.—By Trélat.

A man 26 years old, with a stricture in the lower portion of the œsophagus, caused by swallowing nitric acid in mistake for water, May 26, 1867.

Three weeks later dysphagia began and increased until Oct. 1867, when swallowing was almost impossible.

Dilatation was begun and continued 8 months, swallowing was improved and the dilatation was discontinued.

July 1869, dysphagia returned and dilatation renewed but without benefit. The operation of internal œsophagotomy was decided on, and Dec. 2d, 1869, the first incision was made from below upward with a double-bladed œsophagotome. Pain and hemorrhage slight. Deglutition some improved.

Dec. 16th, second incision, but slight additional improvement in swallowing.

Dec. 31, a third incision made. No pain, but quite profuse hemorrhage followed, which was with difficulty stopped, and recurred Jan. 11th and 17th. Afterwards dilatation was resumed. Feb. 28th, patient fully recoverd and swallowing normal.

Reported by Trélat to l' Académie de Medicine, March 8th, 1870.[2]

CASE 8th.—By Tillaux.[3] Occurring in a sailor, 48 years old, who was admitted to Hospital St. Louis, Oct. 15, 1872.

Ten years before, when in Mexico, he drank, in mistake for brandy, a sharp caustic liquid, the nature of which he did not know. This was followed by a burning sensation behind the sternum, but which soon passed away. Soon after dysphagia began, attended by occasional violent spasms of the œsophagus, so that it was impossible at the time for him to swallow the smallest substance.

[1] Dolbeau: Gazette des Hopitaux, Avril 5th, 1870, p. 159.

[2] Bulletin Général de Thérapeutique medicale et chirurgicale. Mars 30, 1870. Tome 78, p. 252.

[3] Tillaux: Contribution à l' historie de l' œsophagotomie interne. Bulletin Général de Thérapeutique medicale et chirurgicale. Janvier 15, 1873. Tome 84, p. 14.

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From this time dysphagia slowly increased until he had to abandon the use of solid food.

At the time of his admission to the hospital he was able to swallow only liquids, and these with difficulty. He would attempt to assist in swallowing by making pressure from above downwards along the neck.

On examination a stricture was found at the union of pharynx and œsophagus, which would admit only the smallest olive.

Progressive dilatation was begun and continued for twenty days, without any increase in the size of the opening. Accordingly internal œsophagotomy was decided on.

The operation was performed by Tillaux, Nov. 5, with Trélat's œsophagotome. The section was made from below upwards, and was almost painless and bloodless.

Immediately after the operation the first four of the graduated series of olives passed easily; there was no hemorrhage afterwards, and only a slight pain during the following days, in the right lateral part of the neck. Dilatation was continued, and on the 5th day the fifth olive of the series passed, but it was streaked with blood.

On the 8th day the largest, the sixth olive of the series, and of a diameter even larger than the normal calibre of the œsophagus, was passed. The use of this olive was continued, and on the 7th of September, the stricture was considered entirely cicatrized, and the patient was discharged.

Deglutition was normal, and his strength and "embonpoint" were restored as before the accident in Mexico.

Case 9th.—By Studsgaard.[1]

A girl, 8 years of age, on the 30th of June, 1873, in mistake for water, drank a small quantity of a solution of potash used for washing. Several strictures were produced, the deepest being 21 cm. from the upper incisor teeth.

By continuous dilatation the opening was enlarged to admit Nos. 10 and 11 (Charriere) bougie, beyond this it could not be dilated. Accordingly, Sept. 16th, 1873, the stricture was divided from above downwards with an instrument constructed for the purpose. Three weeks afterwards she left the hospital, being then able to swallow meats, etc., and a bougie à ventre No. 27 could be passed.

[1]Studsgaard C.: Œsophagotomia interna ved cicatriciel strictur. Hospitals Tidende. Hjöbenhavn, Oct. 29, 1873, Nr. 44, p. 173.

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Notwithstanding continued dilatation, the stricture recontracted, allowing only No. 14 or 15 to pass—pockets having formed above the stricture. Internal œsophagotomy was again performed with the same instrument June 5th, 1874. This was followed by dilatation, and at the time the report was made, an œsophageal bougie of a diameter 2mm. larger than No. 28 could be easily passed.

CASES 10 and 11.—By Schiltz.[1]

Dec. 12th, 1876, Schiltz reported to the Society of Physicians at Colon, the two following cases of internal œsophagotomy, which he had performed several years before:

The first was that of a woman who had suffered from difficulty in swallowing for months, from a carcinomatous stricture of the œsophagus.

Treatment by dilatation failing to overcome the constriction, internal œsophagotomy was performed. Pain and hemorrhage was slight. After the operation the patient was enabled to swallow meat and bread, and a large sound could be passed readily into the stomach.

After several weeks, however, the stricture gradually contracted again, and the incision was repeated with the same successful result.

Altogether, five incisions were made, without pain or hemorrhage, and each with but temporary improvement in deglutition.

The patient was sustained by introducing food through a tube, and finally died of tuberculosis which she had had for a long time. No autopsy made.

The second patient had an œsophageal stricture, the result, it was thought, of a cicatrized ulcer, that had been produced by strong brandy.

Dilatation was also unsuccessful in this case, and internal œsophagotomy was resorted to.

After the operation a large sound could be introduced one inch deeper, but not into the stomach. A small sound passed through and revealed a second deeper stricture.

[1]SCHILTZ: Correspondenzblatt der ärztlichen Vereine in Rheinland, Westphalen und Lorthringen 1877, April Nr. 19, S. 19., also vide Braun's article, "Œsophagotomia Interna," Czerny's Beiträge zur operativen Chirurgie, 1878, p. 70, et seq., which contains an excellent review of all the cases to that date, and from which these two are taken, owing to the failure of the writer to obtain a copy of Schiltz's original article.

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The operation was attended with considerable pain and hemorrhage, which, uncontrolled by chloride of iron, or by sounds retained *in situ*, lasted five hours.

It was on account of this hemorrhage that Schiltz refused to make a second incision on the deeper stricture.

Owing to deficient alimentation the patient continued to fail, and died of exhaustion eight days after the operation.

The autopsy showed the incision to be cicatrized, and just below the incision, at the cardia, a narrow stricture was found through which a thin lead pencil passed easily.

It was regretted by Schiltz that both strictures were not recognized and incised at the same time, which would have resulted, without doubt, in curing the patient.

CASE 12th.—By Czerny.[1]

A girl, 8 years old, admitted to the Surgical Clinic, Heidelberg, Feb. 20th, 1877, with stricture of the œsophagus, from accidently swallowing lye 10 months before.

Dysphagia gradually increased until only liquids in small quantities could be swallowed. Patient pale and emaciated.

Stricture opposite *manubrium sterni*, 18 cm. from the incisor teeth, admitting an elastic catheter only 3 mm. in diameter.

Stricture now dilated daily with conical œsophageal bougies.

March 6th. Sound 6 mm. passed, and liquid farinaceous food and soft bread swallowed.

March 25th. Catheter 7 mm. passed, finely cut meat swallowed, and nutrition of patient improved.

April 8th. Child dismissed.

May 16th. Readmitted. Marked dysphagia. Bougie 5 mm. passed with difficulty. Several strictures were now found, the lowest the smallest.

Billworth's tin sounds now used without benefit. Notwithstanding dilatation, stricture recontracted until only an elastic bougie $4\frac{8}{10}$ mm. could be passed under anæsthesia.

June 9th. Attempt to use Jameson's dilator (2 mm. in diam.) failed. All attempts at dilatation having failed, Prof. Czerny performed internal œsophagotomy with an œsophagotome, patterned after Ivanchich's urethrotome, only much longer. The patient being anæsthetized, the stricture was divided from below upward, once on the right and once on the posterior side; the blade projecting only 2 mm. Only a trace of blood was seen in the mucus.

[1]Reported by Braun in Czerney's Beiträge, etc. Loc. cit., p. 70.

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Immediately after bougies, 8 and 10 mm. in diam., passed easily.

After recovering from the anæsthesia but little pain was complained of, though violent vomiting occurred several times.

In evening emphysema of neck, which in a few days extended from lower jaw to clavicle, tympanitic and painful on pressure. Swallowing difficult. T. $38\frac{6}{10}°$ to 40° C. ($102\frac{1}{2}°$ to 104° F.) From June 17th to 19th emphysema disappeared. Only fluids and two raw eggs taken daily.

June 21st. Diphtheritic deposit on tonsils, and cervical glands swollen.

Chlorate of potash, locally and internally. Constant pain in throat, though deposit did not extend. Marked dyspnœa.

Without special symptoms patient gradually failed and died June 4th, 4 o'clock, a. m.

Autopsy by Prof. Arnold:

Lymphatic glands of neck swollen, and diphtheritic deposit and infiltration of soft palate and tonsils.

An abscess was found between the œsophagus and spinal column, extending from the third cervical to the third dorsal vertebra. Opposite the *manubrium sterni* it communicated with the pleural cavity on each side, and both contained ichorous pus.

At 5th and 6th cervical vertebræ, there was a wound in the posterior wall of the œsophagus, 2 cm. long, having smooth cut edges, somewhat infiltrated.

The pericesophageal tissue the whole length of the œsophagus was swollen and infiltrated.

In lower third of the œsophagus the mucous membrane was deficient and replaced by cicatricial masses, and at several points large folds of cicatricial tissue. Here also there was an extensive communication between the lumen of the œsophagus and the peri-œsophageal abscess. Both pleural cavities contained ichorous pus, the pleural membranes were opaque, and both lungs highly compressed.

Death was due to section through the whole thickness of the walls of the œsophagus, and an abscess in posterior mediastinum opening into both pleural cavities; diphtheria hastening the fatal termination.

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REMARKS.

In reviewing these cases of internal œsophagotomy it is apparent that but few operations that are performed, after all less dangerous means have failed in averting impending death, give us better and more favorable results than this operation.

Out of the fourteen cases in which the operation has been performed we have but two deaths as a direct result of the operation. (In the first two cases, by Maisonneuve, which unfortunately died from an accidentally associated peritonitis, there was no connection between the operation in the œsophagus and the peritonitis, as was shown by the autopsy. The fact that they both were attacked by peritonitis on the same day, though operated on eight days apart, and died but one day apart, indicates quite clearly a common ulterior cause, other than the operations in the œsophagus.)

In the two cases of Schiltz which died, the one due to cancer should be excluded from the list as unjustifiable, for at the best only temporary improvement could be expected to follow.

A similar case of cancerous stricture in the upper part of the œsophagus came under the care of the writer a short time ago. Although it was desired that he should perform the operation, and although the case was quite as favorable as the one of Schiltz, he refused, as there could be no permanent result but to bring discredit on the operation.

The operation in the second case of Schiltz was successful so far as it went, but as it was incomplete from failure to divide the lowest and tightest stricture, the result must be considered negative—the same as if no operation had been attempted. Had all the constrictions been accurately determined and carefully divided the result would have been quite different, as Schiltz himself was also of the opinion.

The two cases that died as a direct result of the operation—Czerny's and Mackenzie's—the cause was, in both cases, cutting too deeply and penetrating through the walls of the œsophagus.

These two cases should, therefore, warn future operators to exercise great care to guard against the occurrence of this almost inevitably fatal accident.

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INSTRUMENTS USED AND METHOD OF OPERATING.

The operation in itself differs but slightly from internal urethrotomy, and the instrument used is essentially a urethrotome, modified and adapted to the œsophagus.

The instrument employed by Maisonneuve, as described by him, is composed of[1]

1st—A metallic tube, grooved.

2d—A cutting blade.

3d—A bougie conductor, articulated at the end of the tube.

The grooved tube, or two tubes put together as gun barrels, each having a diameter of two mm., and in length fifty cm., is provided at its external extremity with a ring used as a handle, and at its stomachic extremity with a screw to receive the bougie.

The articulated bougie at the end of the groove conductor has an ordinary end and is long enough to pass entirely through the œsophagus.

The blades are each twelve mm. wide; their cutting edge occupying only the anterior third, the other two-thirds being entirely blunt. Each of the blades is supported by a long steel stem, provided with a button for working it, either alone or together with the other blade.

In using the instrument it is first carefully introduced through the stricture, guided by the flexible point. Then one of the blades is introduced into the groove and gently pushed downwards severing the stricture. The second blade is introduced if required.

This instrument was suggested to Maisonneuve's mind by his well known urethrotome, as the operation was suggested by the similar one in the urethra, in which he had shortly before been so successful.

Lanelongue employed an instrument which he had also modeled after the urethrotome, not knowing that Maisonneuve had already done so. It consisted of a metallic stem, hollow and bent, armed with a concealed blade near its inferior extremity. This blade is half elliptical and could be thrown out 1½ cm., beyond the "opercule."

To the lower extremity of the instrument is attached a conducting bougie to facilitate its introduction, It is made of whalebone and has an olive point one mm. in diameter. The

[1]For illustration, vide Lehrbuch der Chirurgie, von Dr. Eduard Albert, 1881, p. 542.

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incision with this instrument is also made from above downwards. (No illustration of this instrument is given.)

That employed by Trélat has a total length of 60 cm.,[1] a stem 42 cm. long, a handle 12 cm. long, and a terminal stem 6 cm. long, having an olive point 4 mm. in diameter.

At the junction of the stem with the shaft is a half-flat bulge. Below this bulb are two blades, concealed, which are thrown out after the instrument has penetrated through the stricture to the bulb, and the incision is made on withdrawing the instrument.

This instrument was also used by Tillaux.

The instrument used by Studsgaard[2] consists of a single hollow metallic stem, tipped with a flexible director. At the junction of the two is a bulb, which contains a double-edged blade, the outer end, on each side, being blunt.

The blade is projected from the lower side of the bulb and the incision made from above downwards.

That employed by Schiltz was devised by himself, patterned after the urethrotome, but will not be published by him until after the passage of the German patent law.

The direction of the incision was also from above downwards.

The one used by Czerny was patterned after Ivanchich's urethrotome, only much longer.

The incision was made from below upwards.

(No illustration of the instrument is given.)

The œsophagotome devised and used by Mackenzie, and also employed by the writer, has already been described and illustrated.

The instruments, used by the operators since Studsgaard, have had but one cutting blade.

The advantage of an instrument with but one cutting blade is at once apparent. By it the side on which the stricture is deepest, as is sometimes the case, can be incised without wounding the opposite side which might be thin and easily cut through. Also, the side can be avoided against which external pressure may be exerted. as, by the crossing of the left bronchus, by the aortic arch or by enlarged lymphatic glands the resistance of which would render penetration through the wall liable.

[1] For illustration, vide Trélat's article, Loc. cit. p. 257.

[2] For illustration, vide original article of Studsgaard, Loc. cit., p. 474.

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We see that in the operations by the more recent operators all the incisions have been made from below upwards, which is considered by far the safest method.

The danger attending the incision of a stricture from above, downwards, is not so great in the upper portion as in the lower portion of the œsophagus, for the reason that the portion of the œsophagus above the crossing of the left bronchus is more rigid, is bound down more firmly than the portion below. The lower portion being more yielding to allow for the great mobility of the diaphragm, and also its being more markedly curved as it passes forward to enter the cardiac portion of the stomach, would be liable to cause the instrument to impinge with greater force against the lower side and endanger the penetration of the œsophageal wall.

It is observed, however, that the only two deaths caused by the operation, followed division of the stricture from below upwards. This was due to the unfavorable condition of the stricture, especially in Dr. Mackenzie's case, rather than to the method employed.

The limited number of operations and the great variations in different cases which have to be studied independently, prevents the establishing of a specified rule for performing the operation.

Notwithstanding this fact it may not be amiss to detail briefly the general plan which will be the safest to follow, as deduced from the reports of the previous operations, and the experience of the writer.

First the œsophagus should be thoroughly explored to determine its exact topographic-anatomical position, in relation to the location and extent of the stricture; the condition of its walls, if atrophied or thinned; the calibre of the stricture compared with that of the œsophagus above, and, if possible, below.

The exploration of the œsophagus is ordinarily best made with small olive shaped balls, tapering alike at both ends, made of ivory or hard rubber, in different sizes, and mounted on a whalebone stem.

I have also a set of metallic bulbs mounted on a gum elastic stem. These I find of advantage in some cases, on account of their weight, as they will drop down the œsophagus by their own gravity, and, by having a very flexible stem, will indicate

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the condition and location of a stricture more accurately than a light ball mounted on a whalebone stem, which is necessarily more or less rigid.

After the condition of the stricture is accurately determined, the depth to the upper and also to the lower side of the stricture is measured and marked on the stem of the œsophogotome, taking the upper incisor teeth as the point to measure from.

The œsophagotome is now introduced (the tongue being drawn gently out and held in a napkin,) until the upper mark on the stem indicates that the blade has passed through the stricture. The blade is now thrown out and the instrument drawn out until the second mark shows that the blade has cut through the stricture, when it is thrown back and the instrument withdrawn.

In all cases an opening through the stricture must be found before an operation can be attempted, for in plunging a cutting instrument downwards without a guide, the danger of a false passage is apparent.

As in other operations, the treatment of the patient is by no means ended when the operation has been performed.

For a day or two after the operation the patient should be permitted to take only the blandest substances to avoid irritating the wound. It may sometimes be better not to give anything by the mouth for two or three days, but to sustain the patient by nutritive enemata.

The following day after the operation, dilatation should be resumed. Without exercising force, the bougies should be gradually increased in size until the fullest extent of dilatation is attained. Should the opening be then insufficient to allow complete alimentation, the operation should be repeated.

In performing the operation it is far better and safer to make several shallow incisions at intervals, and follow each by dilatation, than to make one or two deep incisions at one time.

Afterwards, notwithstanding the fact that nearly all of the cases operated on have been reported as remaining permanently cured, the precaution of occasionally having the bougie introduced should be urged, for, as in urethral strictures, there may remain some contractility of the tissue at the former site of the stricture which may cause it to return.

In the treatment of œsophageal stricture the time-honored

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sound still maintains its wonted place, for it is only after a patient and thorough use of the sound has failed, and other means of alimentation have also failed, that resort to the operation of internal œsophagotomy is justifiable.

The assertion by Hüter[1] that all strictures through which a sound can be made to pass can be cured by dilatation is entirely disproved by these cases, for in each one it was only after the sound had completely failed that the operation was resorted to.

DANGERS ATTENDING THE OPERATION.

The greatest danger attending the operation is that of cutting through the wall of the œsophagus, and the escape of blood and other substances into the surrounding parts, and the consequent formation of peri-œsophageal, mediastinal or pleural abscesses, which is inevitably fatal, as were the two cases in which it occurred—those of Czerny and Mackenzie.

HEMORRHAGE

May prove a serious complication, as shown by the cases of Trélat and Schiltz, in which obstinate bleeding occurred, due undoubtedly to the wounding of an arterial branch leading into the stricture, that had become enlarged in consequence of the diseased action going on in the morbid tissue of the stricture.

EMPHYSEMA

Is a complication that may occur, as shown by Czerny's case. This was certainly caused by air entering the cellular tissue through the opening in the œsophagus made by the incision, and the violent vomiting after the operation. It could not have been due to injury to the lungs, as the lung tissue could not be easily reached by a vertical incision directly through the posterior wall of the œsophagus.

PAIN.

In all the cases, excepting the second case of Schiltz, the operation was almost painless. This was either due to the unnecessary depth of the incision, or to an extremely sensitive or neuralgic condition of the œsophagus.

[1]Jahresbericht über die Leistungen und Fortschritte in der gesammten Medicin, von Virchow und Hirsch, 1873, Bd. II, S. 485.

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Thus we see, on reviewing these cases, that no other known operation on the œsophagus or stomach, could offer a hope for the magnificent results which has followed nearly all the operations of internal œsophagotomy.

With a clear understanding of the merits of this operation, the language of Albert is unaccountable. He says:[1]

"Internal Œsophagotomy is a procedure which led to the invention of different instruments, of which it can be said the operator never knows what he has done with it when he has used it. Exceptional cases in which patients have escaped with their lives, should not tempt us to resort to a method where the injury done in severe cases cannot be estimated, and which in milder cases is entirely superfluous, while in all cases a safer alternative can be employed, which is either external œsophagotomy, or gastrotomy."

Even on a limited search through medical journals and hospital reports we shall find numerous instances recorded, where patients have died from starvation with œsophageal stricture, (or from external œsophagotomy, or gastrotomy, performed in the attempt to avert this result,) when it was found on post-mortem examinations to have been caused by narrow bands of cicatricial or elastic tissue, or membranous folds, in which, if the operation of dividing them by internal section had been made, the obstruction could have been readily and permanently removed.

Illustrative specimens of this character are preserved in the Museum of the College of Surgeons, London.[2]

One (No. 1079,) shows a stricture of œsophagus from a fold of mucous membrane. Just below the cricoid cartilage the œsophagus gradually contracts to half its diameter and then dilates. The mucous membrane at the contracted part, forms transverse, sharp-edged and projecting folds, which pass around the chief part of the circumference of the tube.

Another preparation (No. 1080,) shows a very similar condition in the œsophagus of a child, probably the result of some acrid substance having been swallowed. Three cases also having a membranous contraction in the upper part of the œsophagus, supposed to be congenital, are reported by Zenker and von Ziemssen. In all three the stenosis was located at

[1] Eduard Albert: Lehrbuch der Chirurgie, 1881, p. 541.

[2] Holmes' System of Surgery, London, 2d ed., Vol. IV, p. 490.

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the entrance of the œsophagus. In two cases it was a simple ring about the tube; in the third the canal was narrowed by membranous bands for a distance of 8 mm.[1]

A similar case is also reported by Easton, that of a man who lived on cake and milk for about 55 years.[2]

Respecting the changes in the œsophagus which result from the swallowing of an acrid substance, Rokitansky remarks, that, when "mucous membrane has been destroyed by the energetic action of the poison, it is replaced by serous and sero-fibrous tissue, which gives rise to peculiar valvular strictures of the œsophagus, somewhat analogous to those consequent on dysentery."[3]

The operation of internal œsophagotomy cannot be of avail in those forms of œsophageal strictures, where the walls of the tube are atrophied, or contracted by cicatricial tissue or other disease, so as to greatly reduce the diameter of the tube, where internal urethrotomy would be impracticable under like conditions of the urethra.

It is also especially contraindicated in cancerous contractions of the œsophagus. It is equally true, here as elsewhere, that when the tumor cannot be completely extirpated, the use of the knife only goads it to grow more rapidly.

But in all those cases where the contraction of the calibre of the tube is by cicatricial tissue of not too great extent, by bands or by membranous folds, and by operating early, while the stricture is still permeable, we can with assurance predict for the operation many flattering successes.

In considering the frequent occurrence of death from starvation in stricture of œsophagus, I fully concur with Dr. Dunham,[4] that "it cannot be regarded otherwise than as an opprobrium of Surgery, that hopeless starvation should be accepted as the inevitable issue of simple constriction of the gullet."

Discussion.

DR. A. C. POST, of New York: Mr. President—The writer of the paper seems to ignore the possibility of protracting life for a considerable period by rectal alimen-

[1] Ziemssen's Cyclopædia, Vol. VIII, p. 18.

[2] Easton C. M.: Chicago Medical Journal and Examiner, 1879. Vol. XXXVIII, p. 158.

[3] Path. Anat., Vol. II, p. 10.

[4] Holmes' System of Surgery, Loc. cit. Vol. II, p. 551.

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tation. I do not mean by that statement to say anything against the propriety of making an effort to restore the canal of the œsophagus, but it would seem to be implied from the paper as read that the patient was doomed to starvation, if deglutition could not be accomplished. It is a well established fact that life can be preserved, and persons enjoy a fair degree of health, if judiciously nourished through the rectum.

DR. LOUIS ELSBERG, of New York: MR. President—I can add two successful cases of internal œsophagotomy, which have not been reported. My œsophagotome is a little different from Mackenzie's, employed by Dr. Roe; the knife protrudes from but one side, protrudes the entire length, and has more the shape of half an ellipse, and with it the cutting can be done a little more carefully. The operation should be recommended, but it must be very carefully performed. It is a life-saving operation, and in some cases it is not a question whether you would do it or not. There is a point at which the indication for the operation is imperative. Fortunately, in almost all the chronic cases, there has occurred so much hypertrophy of mucous membrane, or thickening of the entire wall of the œsophagus, that, if the operation of internal œsophagotomy is done carefully, the knife projected only a little, and pointed in different directions, there is little risk of accident. Careful dilatation should be made afterwards with olive formed bougies, which are far better than those generally used. The operation is one which saves life and should be resorted to.

DR. ROE: Mr. President—I did not intend to be understood in my paper that I considered the operation a very simple one or one comparatively free from danger. I fully agree with Dr. Elsberg that too much care cannot be exercised in its performance as there is much greater danger from such operations in the œsophagus than in the urethra. It is, nevertheless, a justifiable operation in cases where it is indicated, as it was in this case which had resisted all other methods of treatment, and should be resorted to more often than it is.

I would also like to say a word in reply to the objection which Dr. Post has raised against the operation, that it is not required because rectal alimentation is sometimes sufficient to sustain individuals indefinitely, and that gastrotomy is sometimes successful. The writer did not overlook these methods of preventing starvation, nor does he advocate the operation, unless in very favorable cases, to the exclusion of attempts to sustain the patient by rectal or other alimentation. It is rarely, however, that supplementary means of alimentation succeed—sooner or later the bowel becomes intolerant to substances introduced into it, and if gastrotomy is performed the patient usually dies as the direct result of the operation. If he survives the operation his death is then a mere question of time. Among the large number of operations for gastrotomy (about sixty,) that have been performed already, there are at present but two or three cases still living—a few days or weeks, to as many months, includes the length of time which the patient survives, even in cases of benign stricture; but if internal œsophagotomy is successfully performed the patient is not only temporarily relieved but is permanently cured. Already from the few operations of internal œsophagotomy that have been done, more permanently successful cases are reported than from gastrotomy, external œsophagotomy, or any other operative means of preventing impending starvation.

NOTE.—Since this paper was read, Mackenzie's case has been published in Transactions of the International Medical Congress, London, 1881, Vol. III, p. 332.

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XXIV.—THE TREATMENT OF WINE-MARK BY ELECTROLYSIS.

By GEORGE HENRY FOX, M. D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York.

Two years ago I had the privilege of making some remarks before this Society on three methods of treating the superficial nævus, or "wine-mark." These methods were: by linear scarification, as recommended by Mr. Balmanno Squire, of London; by puncture, or so-called "tattooing," as recommended by Dr. Sherwell, of Brooklyn; and by electrolysis. The success which has attended the use of electrolysis in the removal of superfluous hair, first led me to think that the electrolytic needle might be used to advantage in the treatment of wine-mark, by a subcutaneous destruction of the capillary vessels. I did not start with the idea that this plan of treatment would remove a wine-mark and leave the skin in a perfectly normal condition, but it occurred to me that by creating numerous minute cicatrices upon the surface of the patch the color could be so reduced that the mark would present little contrast with the surrounding skin. At the same time there would be no danger of producing a smooth scar of a dead white hue and contractile character, which would be scarcely less disfiguring than the original deformity. At the meeting of the Society referred to, I suggested this operation, and mentioned a case in which I had resorted to it with partial success. To-day, with more experience in the treatment of this affection, I can recommend electrolysis as being, in my judgment, the best method, except for the mildest cases, in which a simpler plan will suffice. The object aimed at in electrolysis, as in scarification and puncture, is to excite sufficient inflammation to destroy the fine network of blood-vessels. As the galvanic current is more active, and at the same time more manageable than acid adhering to the point of a needle, it is not strange that this method should produce the desired effect in the speediest manner and with the least injury to the surface of the skin.

The operation is quite similar to that which I have already described in a paper read before this Society, on "the permanent removal of hair by electrolysis." A single needle, or an

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instrument containing a dozen or more needles with points upon the same plane and about two millimetres apart, is attached to the negative cord of a constant-current battery. If these needles are fine and with sharp points they can be quickly pressed into the skin without inflicting much pain, and the electrolytic action which takes place around them as soon as the galvanic circuit is complete, serves to destroy the capillary net work upon which the existence of the wine-mark depends. This it does with but slight injury to the skin itself. The instrument which I have employed is a small brass disc, with from four to twenty holes, through which are crowded fine cambric needles. This disc (fig. 1) screws on a handle about the size of a short pen-holder. When the needles are introduced into the affected skin and the patient completes the circuit by grasping a moistened sponge electrode attached to the positive cord, a blanching of the tissue for a small space around the needles is immediately observed. With ten or fifteen cells of an ordinary zinc and carbon battery in use, the needles should be allowed to remain in the skin from ten to thirty seconds, the exact time depending upon the delicacy of the skin and the effect observed. The blanching of the skin around the needles disappears in a few minutes, and nothing is seen but the punctures. In a day or two a group of dark pits or minute crusts are observed where the needles were introduced. In about three weeks the effect of the electrolysis becomes manifest, although the change may be so slight as to indicate a repetition of the procedure. In a case where a dark patch has existed, and the instrument has been repeatedly employed, the change consists in the transformation of color from purple to dark red, and through varying shades of red and pink to a light orange. At the same time the surface of the patch, upon close inspection, will be found to be covered

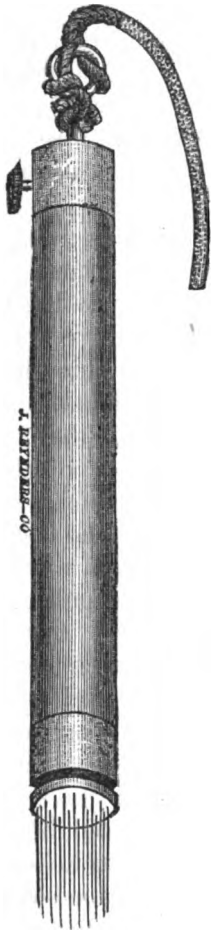

FIG. 1.

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by minute whitish dots. These are the cicatrices caused by the destruction of tissue at the numerous points where the needle was introduced into the skin, and are of so slight a character that they are only apparent upon close inspection.

In every case of wine-mark of a severe grade, characterized by a deep purplish color and a tendency to the formation of angiomata or small venous excresences, the use of the multiple needle instrument, in the manner which I have suggested, will certainly produce a most marked improvement in the appearance of the patient in a few months or even weeks. It will not suffice, however, for a complete removal of the mark. Indeed, where there is dilatation of the deeper plexus of blood vessels, as is frequently the case in an aggravated form of the affection, there may be a slight tendency toward a return of the purplish hue, after this has been removed by the operation. In such cases it is advisable to employ a very fine and flexible steel needle, and to introduce this in an oblique direction beneath the skin to a depth of a centimetre or more. By this plan it is possible to destroy some of the larger vessels through which the blood flows in its passage to and from the superficial capillary network. In this connection it will be remembered by some that Mr. Balmanno Squire, in his first publication on the treatment of wine-mark by linear scarification, advised that the incisions be made perpendicular to the surface of the skin. Later, however, he found that much better results could be obtained by making oblique incisions.

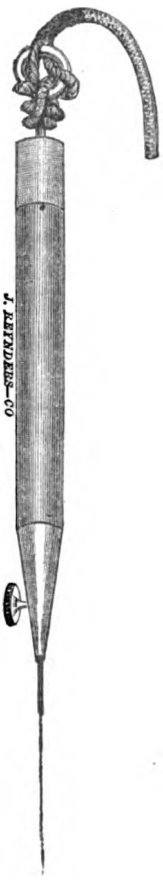

FIG. 2.

In an extensive wine-mark of the face involving the eyelids, the single needle (fig. 2) must necessarily be used, and I have been surprised and pleased to note the decided change in the expression of a patient's eyes when the dark color of the lower lid and malar region has been removed In a case where the upper lip was involved by the nævus and projected considerably at the angle of the mouth, a diminution of size was effected by piercing the lip with a fine electrolytic needle. But the injection of a few

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drops of pure carbolic acid beneath the mucous surface of this lip proved to be a more effective and less painful mode of treatment.

In recommending electrolysis in the treatment of winemark, it is but just to speak of its objectionable features. In the first place, the operation is a somewhat tedious and painful one, and consequently not adapted to the treatment of children who are not old enough to be annoyed by the disfigurement, and who are therefore unwilling to suffer a little pain for the sake of its removal. I have experimented with local anæsthesia, but have failed to find it of any particular service. Very likely others might have better success with it. In the second place, there is a slight danger of causing suppuration and superficial sloughing of the skin in some cases, and a tendency in other cases to the formation of small outgrowths of a keloidal appearance. In one case I was quite annoyed at an unexpected ulcer, of the size of a split pea, which resulted from my treatment, and left a slight depressed scar upon the cheek; and in two cases trifling ulceration was followed by the developement of small, firm, vascular nodules. These were suggestive of keloidal growth at first, but they disappeared in the course of a few months, leaving the skin perfectly smooth. Some who have attempted the removal of wine-marks by Squire's method have reported failure and the development of keloid as the result of their endeavors. Whether these resulting excrescences were really keloidal growths is a question, but the tendency to the formation of vascular nodules, before as well as after operations in cases of wine-mark, has been noted, and in using electrolysis the production of even minute ulcers should be carefully avoided.

Finally, I would remark that in recommending a new method for the removal of wine-mark, I feel chary of speaking too confidently of its merits, bearing in mind the fact that other methods of treatment, which have been recommended to the profession with more or less ardor during the past ten years, have failed to stand the test of time and trial at other hands. I do not believe it is possible to remove a wine-mark and leave a perfectly normal skin, but I do assert that the most unsightly and disfiguring patches can be greatly improved, if not entirely removed, by the production of numerous punctiform cicatrices, so small as to be scarcely noticeable save upon close inspec-

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tion. I do not claim that the operation which I have practiced accomplishes all that could be desired, but I am sure you will agree that a brilliant and most satisfactory result is accomplished, if we do no more than transform a dark and unsightly stain into a smooth patch of a light pink hue.

As a summary of my experience, I may state briefly that wine-mark is not, as is commonly imagined, beyond the reach of surgical skill; that the most unsightly and disfiguring cases can be greatly improved, if not entirely removed; that in few, if any cases, can the mark be taken away without leaving faint scars, or, at least, a change in the character of the skin; that electrolysis, in my judgment, furnishes the best means of treatment, and that it is especially adapted to those cases in which the mark is more or less venous in character and of a dark purplish color.

Discussion.

DR. S. SHERWELL, of Brooklyn: Mr. President—This subject was brought before us two years ago, and I then wished Dr. Fox success, and I wish now he had had more successes. I am sorry he has not met with more successes than I have by the use of my own device. I think the same results are obtained by multiform punctures with needles, the tips of which have been dipped in a solution of some caustic, such as chromic acid, or carbolic acid. I think, as the Doctor says, the operation results in an improvement but not a cure. I have approximated a cure in small nævi; they are, perhaps, almost entirely cured; at most, there is only a slight rosaceous appearance about the face. Keloidal growths are sometimes slightly manifest, after my method has been employed. I have occasionally seen scarring result from too severe treatment, and little abscesses may be produced, which may be followed by keloidal growth.

DR. H. KNAPP, of New York: Mr. President—Sometime ago I mentioned the good results which may follow only the partial removal of these vascular growths, and it was based upon the result in a case which occurred in one of my own children. There was a wine-mark upon the upper eyelid and the main vascularity was just on the angle of the nose. Dr. Jacobi saw the case, and we waited for some four or five months, and then there was a decided increase of the vascularity, and the red color became more intense and stretched across the nose from one side to the other. We, therefore, cauterized the base at the angle of the nose with nitric acid, which produced a scar, but gradually the entire nævus disappeared. Just at that point the growth was most marked, and had a cavernous structure, but as soon as it was destroyed the remainder disappeared of itself. Perhaps this principle can be made use of in other cases, and when we find the starting point, destroy that, and perhaps the remainder will be obliterated as an indirect result.

DR. B. F. SHERMAN, of Ogdensburg: Mr. President—I had a case under my own observation several years ago, and a natural ulceration which occurred produced precisely the same results Dr. Knapp has mentioned. The patient has grown to be a young lady, probably fifteen years old, and there is scarcely any deformity

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XXV.—FACIAL PARALYSIS, OCCURRING IN CONNECTION WITH AURAL DISEASE. WITH TWO ILLUSTRATIVE CASES.

By SAMUEL SEXTON, M. D., Aural Surgeon to the N. Y. Eye and Ear Infirmary, New York.

CASE I.—*Facial paralysis of the right side caused by necrosis of the petrous bone, occurring in a case of chronic purulent inflammation of the middle-ear.*

The case was a woman, nineteen years of age. When about ten years old she experienced buzzing in the right ear. Coming for treatment in November, 1880, she stated that the ear never discharged until six months previously; commencing after "pains and a gathering" in the ear. Four months ago she caught a severe cold in the head, and one week afterwards she found on getting up in the morning that the right side of the face was paralyzed; the mouth was drawn to the left, and she was unable to close the right eye. She was not suffering pain when she came for treatment, but previously she had suffered much from neuralgia in the right temporal region, perhaps partly from dental caries. For the past four months the attacks have been of a more distinctly paroxysmal character. For the past two months she was never free of vertigo, and was in constant fear of falling backwards; her gait is staggering. When pressed for a statement respecting the duration of the aural disease, she admitted that the ear had always had a bad odor.

On examination, a large polypus was seen to almost fill the right external auditory canal, and the probe detected the presence of a detached sequestrum of bone deep in the canal. The polypus, which was attached to the superior-posterior wall of the canal, near its outer extremity, was removed by the snare, and the sequestrum was immediately afterwards brought away by the foreign-body forceps. The latter came away with difficulty, although the external auditory canal was fortunately very large. The sequestrum, when examined, proved to consist of a plate of irregularly rounded bone about one-fourth of an inch (6 mm.) in diameter, one portion of which was very thin and the other nearly a quarter of an inch (6 mm.) in thickness. This sequestrum was examined by

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Prof. J. D. Bryant and myself, and is believed to consist of the roof of the tympanum and a portion of the mastoid body just external to the hiatus Fallopii. A ridge on the specimen corresponds to the anterior ridge of the groove on the superior border of the bone located beneath the superior petrosal sinus. The reticulated arrangement in the cavity of the specimen has the general arrangement of the reticula of the antrum mastoideum ; besides which, the relations of the compact and cancellous tissues are such as to exclude its having been located elsewhere. The superior surface of the sequestrum, where it came in contact with the dura mater, was roughened by caries.

After the removal of the sequestrum, another large polypoid mass was taken away from the ear, leaving a very large cavity at the junction of the canal and the posterior wall of the tympanum.

At the bottom of this cavity was a mass of granulation tissue, which, under the use of powdered acidum boracicum, soon disappeared, and the discharge ceased. The facial nerve, when tested by Dr. McBride, did not respond to either galvanism or faradism, although at first the muscles of the face gave degenerative reaction.

In this case, the facial nerve was undoubtedly impaired before the chorda tympani was given off, for there was very decided modification of the sense of taste on the right side of the tongue. The palate was unaffected. The palsy has been treated by the galvanic current, but with slight improvement. Hearing was not entirely lost. The patient is at present free of vertigo and tinnitus aurium, but has occasional headaches, owing to a rather broken-down condition, and the continuance of oral and naso-pharyngeal irritation.

CASE II.—*Bilateral facial paralysis occurring in a case of sudden deafness from syphilis.*

This patient was a man 40 years of age, who contracted syphilis in the summer of 1879, and was treated in Charity Hospital. Three months later, having taken a severe cold, he had paralysis of the *right* side of the face. Three months after this attack—and six months subsequent to the syphilitic infection, he was again very much exposed to a cold rainstorm, and went to bed with a severe cold ; on getting up the

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following morning he experienced so much vertigo that he could only walk with difficulty. While eating his breakfast, he found that he could open his mouth only wide enough to admit a spoon between his teeth. A facial paralysis of the *left* side had now occurred, and the inability to get food into his mouth was owing doubtlessly, to the unique employment of the unaffected muscles used in mastication.

The patient at this time experienced severe pains in the right side of the head. Soon after the experience above related, as taking place at breakfast, while trying to converse with a friend, he found himself to be perfectly deaf in both ears, since which time he has been unable to hear a single word, however loudly spoken. The patient was not conscious of any deafness following the first attack of paralysis on the right side.

When the patient first experienced difficulty in opening the mouth, he fancied that he had the "lock-jaw," and he then ascertained that instead of the face being drawn to the left, both sides were now alike. Following both these paralytic invasions, he experienced distressing tinnitus aurium, which continued up to the time he was seen—some eighteen months after the initial attack. He also suffered greatly from pains in the head and vertigo until a short time before I saw him. He could not, of course, either whisper or whistle. No treatment was attempted.

A view of this patient when the face was in repose gave the characteristic facial expression in this affection; the eyes had a horridly staring look, while the entire face was an expressionless blank. When trying to explain the symptoms of his case the difficulty experienced in enunciation, together with the nasal tone and collapsing of the nostrils—the latter preventing the entrance of air into the nose—caused the patient to exert himself in the most painful manner, yet the face gave no evidence of the struggle taking place. The absence of nearly all the teeth rendered articulation still more difficult. When an effort was made to close the mouth and eyes, the former was accomplished by the action of the temporal, masseter, and internal pterygoid muscles; the patient was, however, inclined to use his hand when requested to bring the jaws together. It was not possible to close the eyes, but he was able to roll them upwards and inwards, the lower

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lid remaining inactive, the upper lid dropping down slightly by its own weight; the effect of the display of the lower portion of the cornea between the wide-separated lids was ghastly in the extreme. Fortunately for these cases, the levator palpebræ not being supplied by the facial nerve, the upper lid can be raised from the eye.

The cause of the paralysis in this case is somewhat in doubt. There is a possibility that the morbid process which gave rise to it may have been at the base of the brain; if so, it was probably syphilitic. There are reasons, however, for believing that the cause was peripheral, the most important of which are the aural symptoms; the attacks followed colds during which there were pains in the neighborhood of the ear and disturbances of the functions of both the transmitting and perceptive regions of the ear. The exact seat of the lesion, if peripheral, cannot be told, for there were but slight morbid changes in the ear perceptible to the eye, and the patient did not return again to have the sense of taste, etc., tested.*

The symptoms accompanying Bell's paralysis are so familiar to the profession that I shall only venture to offer the above cases as a contribution to the literature of the subject, and as pointing to diseased processes about the ear as a frequent cause, leaving the discussion of the strictly neurological aspect of the disease to those who make a special study of the subject. The nearness of the aquæductus Fallopii to the middle-ear, which is well known to be specially obnoxious to colds, would seem to account for the frequency of paresis of the facial nerve in diseases of the ear, rather than cold affecting the nerve after it has left the stylo-mastoid foramen. It is well known to otologists that grave and aural disease may exist for a long time without implicating the facial nerve:—and is it not probable that the Fallopian canal may, in some instances, from its defectiveness, afford inadequate protection to the nerve?

* For other features of this case, especially as regards the hearing, see American Journal of Otology, vol. II, p. 304.

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XXVI.—REPORT OF A CASE OF MOLLUSCUM FIBROSUM.

By GEO. G. HOPKINS, M. D., Brooklyn, N. Y., Consulting Surgeon L. I. C. Hospital, Visiting Surgeon to St. John's Hospital.

Mary G. K.—aged 47 years, white, single, school teacher by occupation. Father a native of New York city, mother a native of Nantucket, Mass. No taint of any kind to be discovered in the family history.

The patient, when 25 years of age, suffered from extreme debility, the emaciation being very marked. Her physician ascribed her condition, at that time, to "disease of the spinal cord." Shortly after this, she thinks within a year, she noticed a tumor, about the size of a walnut, in the left interscapular space, near the lower angle of the scapula. Severe pain, neuralgic in character, was experienced from time to time, in the neighborhood of the tumor, but not sufficiently severe and continuous to lead her to consent to surgical interference.

This tumor remained stationary for seventeen years. When in her forty-second year, she noticed that the tumor was increasing in size, and for the past five years it has continued to grow, until the time of its removal, when it had attained the size of a large beef kidney, becoming all the time more and more painful, with a sense of great pressure, which became unbearable, giving her little rest at night, and compelling her to sit upright in a chair, without touching the back, as that gave rise to intense pain.

She had consulted several physicians during the past two years, most of whom recommended an operation for its removal, one telling her that it was of a cancerous nature, and that she would not live a year. Her mother had always been opposed to any operative interference in the case, as she felt sure she could not survive the removal of the tumor. Her mother having died in the spring, Miss K. decided to submit to any operation promising relief, as her constantly increasing pain was undermining her health.

Within two or three years, after the appearance of this large tumor, small tumors began to grow on different parts of the body, some sessile and some pedicellate.

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At the time of the renewed growth of the large tumor a profuse crop of subcutaneous tumors appeared on the face.

The sessile tumors varied very much in size, those on the body attaining the size of half an inch (13 mm.) in diameter. The pedicellate tumors were more uniform in size, the largest being three-quarters of an inch (19 mm.) in transverse diameter, the greater portion of them averaging about half an inch (13 mm.) in their transverse diameter, and with the pedicle protruded from the surface about an inch (25 mm.).

She informed me that several times when she found one of the pedicellate tumors very much in the way, that she ligated it with a piece of spool cotton, and it would drop off in a few days, and the resulting ulcer heal very rapidly.

On the face there were	58	Tumors (of a sixteenth of an inch (1½ mm.) and larger, the smaller ones being so numerous that they were not counted.
On the neck there were	36	"
On the two hands there were	45	"
On the two arms there were	58	"
On the trunk there were	274	"
And on the two lower limbs there were	31	"
Total	502	

Miss K. was brought to me early in July, 1881, by my friend Dr. W. W. Reese, to consult as to the advisability of removing the offending inter-scapular tumor, and if I thought it safe, to have me remove it. My judgment was that it should be immediately removed, and it was decided to admit her to St. John's Hospital.

She was admitted to Hospital July 20th, 1881, having been instructed to come fasting and prepared to undergo an immediate operation. My decision being unanimously sustained by the staff, assisted by the members of the staff I removed the tumor.

Examination before the operation gave the following results: General appearance of the patient, thin, of sallow complexion, about five feet five inches (1.65 meters) in height, weight about one hundred and twelve pounds, (50.8 kilos). The pain of the tumor, now severe all the time, is the only symptom of which she complains. She is just passing the menopause, having ceased to menstruate in February last.

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A hard, smooth, movable tumor, about the size of a beef's kidney, was to be seen in the left interscapular space; its position but slightly changed by manipulation, showing deep attachments, but not firm ones.

The operation was performed, under ether, with antiseptic precautions. The tumor was found lying under the trapezius muscle, pressing close the spinal processes of the vertebræ and dipping under the inner edge of the left scapula. Removal accomplished without much difficulty, only one small vessel requiring ligation. The edges of the wound—which was about 7 inches (176 mm.) in length—were coaptated by twelve carbolized silk sutures. Drainage tube inserted. The whole covered with a large pledget of oakum, spica bandage of the trunk applied.

Reaction prompt and very satisfactory. Quin. Sulph. gr. x, (gm. 0.65) administered and patient put to bed.

Union by first intention throughout the whole length of the wound was secured.

Record of temperature was as follows:—

July	21st,	8 A. M.,	100.5°	8 P. M.,	101.25°
"	22d,	" "	98.5°	" "	99.°
"	23d,	" "	99.°	" "	100.°
"	24th,	" "	98.5°	" "	99.°
"	25th,	" "	98.5°	" "	99.°
"	26th,	" "	98.5°	" "	99.°
"	27th,	" "	98.5°	" "	98.5°

July 28th and 30th continued normal and dressing removed.

Dr. B. F. Westbrook kindly took the specimen for microscopic examination; he says:—

"The large tumor was a true fibroma. The connective tissue was very firm: the spaces between the fibres narrow: the cells not numerous. They were flattened and spindle-shaped. The outer layers of the tissue formed the capsule.

"The small tumors were also fibroid in structure, but with wider meshes and more succulent. They contained in the areolæ of the connective tissue, a large quantity of *serosity*, resembling an œdema. It is a typical case of molluscum simplex. A case almost identical with it, is described, together with the histological appearances, by Virchow in his work on tumors."

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This comparatively rare disease is well illustrated in the photographs which I have had taken of the patient. But they do not show the parts of the body most heavily studded with the tumors. I could not prevail on my patient to let me have a front view taken, even with her face covered. But these photographs illustrate the case very well and show the position of the large fibroid which was removed. In the case reported by Virchow, the tumor was on the same side, but was about eight times as large. The disease is regarded by most authors as much more frequent in the dark skinned races than in the white, as are in fact all hypertrophic skin diseases. This patient being white is a point worthy of note. I note also the absence of a diagnostic point, laid down by most writers on this disease, viz: the oozing of a sebaceous fluid from the pedicellate tumors on pressure. I was unable to squeeze any fluid from the tumors on this patient. The patient at present writing is in perfect health.

XXVII.—THE APPLICATION, BY INSUFFLATION, OF MEDICATED POWDERS TO THE UPPER AIR PASSAGES, FOR THE RELIEF OF CATARRHAL CONDITIONS.

By D. H. GOODWILLIE, M. D., New York.

To the general practitioner the local treatment of catarrhal conditions of the upper air passages too often becomes an irksome duty.

The reason no doubt lies in the fact that when such conditions excite attention, there is no efficient means of local treatment.

Chronic naso-pharyngeal catarrh in the majority of cases has its beginning in early life, and comes under the observation of the general practitioner.

A rhinitis neglected in childhood with the accompanying hyperplasia, resulting in hypertrophies of the tissues, and followed by the consequent malformations of various kinds, prevents normal respiration and creates naso-pharyngeal catarrh in adult life. Hence the importance of early treatment and its claims on the attention of the family physician. He

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may not be able to treat all cases, particularly those of a chronic character, as well as an expert, but there is no doubt that with the proper attention *early* given, with some efficient means both local and general, he will not only give much relief, but prevent trouble in adult life.

But I cannot trespass on your time to give here the etiology of naso-pharyngeal catarrh, however interesting it may be, or to speak of general treatment.

My object at this time is to engage your attention to efficient means of local treatment for general use.

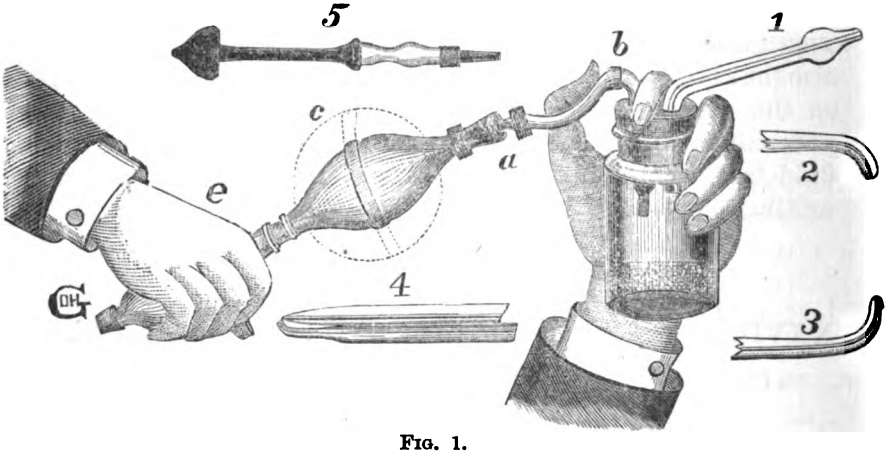

FIG. 1.

I claim no originality in it, only to make the means a little more efficient and the results more effectual to bring relief through your ministrations..

This local treatment consists in making applications of *finely triturated medicated powders*, by means of an improved insufflator.

The insufflator, fig. 1, is in principle the same as the one brought to the attention of the profession some time since by Dr. A. H. Smith,* of New York. Glass tubes being now substituted instead of hard rubber, with valves inside the bottle, so that it is closed when not in use.

It consists of a bottle that can be readily held in the hand, and that contains the medicated powder.

Through the cork pass two thick glass tubes with valves inside the bottle. One of these (1) conveys the powder from the bottle and has an enlargement on its end to fit the vestibule

*[See page 60, of this volume.]

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of the nostril. Two other tubes are also made use of to make applications, (2) to the larynx, or (3) to the posterior nares.

The other tube (b) passes also through the cork, and has a valve on the end within the bottle.

The other end is attached by rubber tubing to the rubber balls that supply the air. The rubber balls are readily joined and disjoined to the bottle by a hard rubber attachment (a).

The air is supplied by two rubber balls (e c) closely joined together with a valve between them. One of these (e) is worked by the hand and forces the air into the other ball (c) which can be distended according to the amount of air force required.

The calibres of the bottle and the glass tubes are suited to the capacity of the air balls.

When an application is to be made, take the bottle in the hand (Fig. 1) and with the thumb press firmly on the rubber tube over the end of the glass air tube (b) so as to close entirely the passage of any air into the bottle.

Now force by the hand the air in rubber ball (e) into the ball (c), and distend it according to the amount of air force required.

Before an application is made, the nasal cavity should be as thoroughly cleansed as possible, then, the powder blown in. The first application will cause an increased secretion from the muciparous glands, and possibly excite a sneeze. Then the nose should be blown, after which the powder should again be effectually applied.

To make an effectual application to the nose, pharynx, and larynx, the following method may be used:

Distend the air ball (c) of the insufflator, then direct your patient to shut the mouth and exhale through the nose,—the moment he ceases to exhale, apply the nozzle of the tube into the nostril, then direct the patient to inhale, at the same instant make the insufflation, and the whole surface from the anterior nares to the larynx has an application of the powder.

If there is any stenosis in the nostrils, this cannot be so well accomplished, and it will become necessary to make the application post nasal also, by using the proper tube (3).

When an application is to be made to the larynx only, use the down tube (2).

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In the same manner can spray be used if desired, but more air-force will be necessary (4).

The tube 5, figure 1, is for inflating the internal ear passages, and can also be used to blow mucus from the posterior nares where there is stenosis in the anterior nares.

IMPALPABLE MEDICATED POWDERS.

The success in local treatment lies in a great measure in the properly prepared therapeutic agents and their effectual application.

Impalpable medicated powders will be found of great value for general use and more especially for the nasal cavity. But *very much* of their therapeutic value lies in their proper trituration. Extreme minute division is *absolutely necessary* to obtain good results.

When proper trituration is attained, the impalpable powder, when blown into the air, floats like smoke, or when blown into the air passages, passes into every part.

The valuable gums employed in some of the powders cannot be effectually triturated in small quantities and retain their therapeutic value.

I have found that to do this well it is much better to triturate them *slowly* in *large quantities* and at a *cold temperature*. This prevents frictional heat which has a tendency to impair the therapeutic value of the gums especially.

The following powders have been found most useful for general use:—

℞. No. I.

Benzoin gum	℥i	10
Morphia muriate	gr. vi	1
Bismuth sub-nitrate, Potassium nitrate,	a. a. ℥ss	40

Valuable for its sedative action. To be used in hyperæmic conditions, with pain. In the beginning of an attack of rhinitis coat the mucous surface with it.

℞. No. II.

Alum,	℥i	4
Acacia gum, Bismuth sub-nitrate, Potassium nitrate,	a. a. ℥iv	16

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Useful where a strong astringent is indicated. In case of hemorrhage from the nose remove all the clot and immediately blow in this powder abundantly until the bleeding ceases.

℞. No. III.

Iodoform, Camphor,	a. a.	ʒi	4
Bismuth sub-nitrate, Potassium nitrate,	a. a.	℥ iss	12

A good antiseptic. To be used where the discharges are fetid or where ulceration is present, or an excessive amount of granulations. The camphor masks the odor of the iodoform.

These powders when impalpable can be more effectually applied to the nasal passages than sprays, and their good effect is certainly more prolonged.

For the general practitioner they are vastly more convenient than sprays.

The insufflators are made by P. H. Schmidt, corner of Broadway and 34th street, New York, where also these powders can be obtained by the ounce.

The set of three insufflators with nasal speculums and tongue spatula can be had in a convenient portable case, such as the one I now pass around for your inspection.

XXVIII.—REPORT OF THE COMMITTEE ON HYGIENE.

To The Medical Society of the State of New York.

GENTLEMEN:—Your Committee on Hygiene respectfully report that the work of the last year has been confined to the field of contagious disease. The widespread prevalence of Small Pox has called especial attention in most sections of the State, to the subject of vaccination. The studies of the last year as to the contagious character of Diphtheria, have yielded very satisfactory and interesting results, and it was the design of your Committee to have continued them during the period covered by this report. The prevalence of Small Pox and the attention called to means for preventing its

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spread, have occupied the attention of the profession to an extent which has interfered with the observations in the previous line of study to such a degree, that your Committee has decided to report progress only at this time, and depend upon the contributions of the coming year, to make a fuller and more satisfactory report.

Respectfully submitted,

E. V. STODDARD, *Chairman.*

E. V. STODDARD,
STEPHEN SMITH,
J. S. MOSHER,
J. FOSTER JENKINS,
C. GREEN,
E. HUTCHINSON,
H. JEWETT,
} *Committee.*

February, 1882.

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OBITUARIES.

I.—A Memoir of Professor James Platt White, M. D.

By Austin Flint, M. D., of New York.

The late Professor James Platt White, within a year of his death said to the writer of this memoir: "I wish that when I am gone you would write my biography." He then had reached the age of three score years and ten. He was the personification of healthful vigor, both of body and mind. It seemed reasonable to say with reference to this wish that probably he would be the survivor. Providence decreed otherwise, and I have the sad satisfaction of undertaking a compliance with what I regard as his request. The request was not intended as a compliment. It had no reference to any supposed ability as a writer of biography, for he knew that I had very little experience in that branch of literary composition. It proceeded from a confidence in the writer's qualification for the undertaking, so far as this depends on a thorough knowledge of character, derived from a very long and a very close intimacy. Our acquaintance began in 1836. We had then just entered upon the struggle for professional success in the city of Buffalo. Our more intimate relations date from our co-operation in the establishment of the Medical College in that city, in 1846. For the next ten years, during which period we were colleagues and fellow associates, we were in almost daily intercourse, and our intimate friendship continued after that period, without interruption up to his death. It is certainly rare for a friendship, not involving any ties of consanguinity, to be maintained steadily so long and with complete unreserve in mutual confidence. Perhaps the best evidence of true friendship is entire freedom among friends in making the mental traits of each the subjects of discussion with each other. Our friendship was a true one as judged by this test.

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These personal remarks seem called for in justice to the memory of my friend as well as to myself, after having stated his desire that I should be his biographer.

Dr. White's lineage was Puritan, his ancestry in this country extending to Peregrine White, the first child born in the Plymouth colony. He was born in Austerlitz, Columbia Co., N. Y., March 14, 1811. At the time of his death, September 28, 1881, he was, therefore, in his 71st year. His grandfather was a soldier in the Revolutionary war, and his father, David Pierson White, in the war of 1812. His parents were types of the families which constitute the bone and sinew of this country. They removed to East Hamburg, in the county of Erie, in Western New York, in 1816. This removal at that time was an emigration to the far West. They lived to see their eldest son attain to eminence. At the time of the removal of his father's family to Erie county, he was five years of age. His thirst for knowledge and his application to studies enabled him, with the opportunities within his reach, to acquire a good English, and a fair classical education. He commenced the study of law, but shortly resolved to enter the profession of medicine. Supplementing, by teaching school, the means which his father could afford, he carried this resolution into effect. He attended a course of medical lectures at Fairfield, N. Y., then the seat of a flourishing medical school, and afterwards, a course at the Jefferson Medical College, taking from the latter his degree.

Circumstances led him into the responsibilities of medical practice prior to his graduation. During the prevalence of epidemic cholera in 1832, Buffalo and its vicinity suffered greatly from a visitation of that disease. Black Rock, then a village distinct from Buffalo, was insufficiently supplied with physicians. Young White, in this emergency, was solicited to go there as a representative of his preceptors, the two leading physicians of Buffalo. He acquitted himself to the satisfaction of the latter, and of the people of the village. This experience had probably not a small influence in preparing him for his subsequent rapid success as a practitioner. It did not, however, prevent him from continuing his studies for two years longer, and acquiring his diploma from an institution then, as now, ranking among the first in this country.

Dr. White established himself as a practitioner in Buffalo in

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1835, and in the year following, he married Mary Elizabeth, the only daughter of the late Henry F. Penfield, Esq., of the town of Penfield in New York. This matrimonial union was in all regards conducive to mutual happiness. Shortly after his marriage he met with a remarkable accident. Railroads had not extended in those days into Western New York, and traveling in a stage coach over a rough road, his head was jolted upward against the top of the coach with such force as to fracture the atlas. Fortunately there was no displacement of the fractured portion of the bone. He was, however, obliged to keep the bed for a long time, and eventually an entire segment of the atlas was expectorated. He recovered with permanent loss of the power of rotation of the head upon the neck.

Observation shows that, as a rule, very speedy progress at the outset of medical practice is premature and not likely to lead to permanent success. Dr. White's career as a practitioner was an exception to this rule. The instances are rare in which progress is so quick and rapid. His success in acquiring practice became speedily great. In a few years he had in this respect outstripped not only his competitors of equal age, but his seniors. For more than 40 years his practice was limited only by his power of endurance and his willingness to work. His physical capability for work was remarkable, and this, together with energy, promptness, self-confidence, added to real ability as a practitioner, secured and maintained a degree of success to which but few attain. He resolved at the outset to succeed, and with him, to resolve was to persevere and spare no efforts requisite for success.

The establishment of the medical school at Buffalo was very largely due to his exertions. It was necessary to overcome opposition from some of the older and the most influential members of the medical profession in Buffalo. At that time the school at Geneva, New York, had large classes, and an able Faculty. Most of the members of this Faculty were led to accept appointments in the Buffalo school, in view of its geographical and clinical advantages. Public interest was aroused sufficiently to obtain the funds needed for a substantial building. The continued prosperity of the school is fairly a source of pride to those who coöperated in its establishment. Dr. White's labors as the Professor of Obstetrics

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and Gynæcology were continued up to the time of his death. As a teacher he was direct, forcible and practical; he did not aim at rhetorical or oratorical display, but his object was sound teaching, the value of which was to be verified at the bedside.

He was the first to introduce into this country in connection with didactic teaching, the clinical illustration of labor, as he termed it, "Demonstrative midwifery." The arrangements were made with the utmost regard for propriety and delicacy. The innovation, however, aroused a storm of abuse from the enemies of the college. A protest signed by a number of the medical profession in Buffalo was offered for publication to the editor of the Buffalo Medical Journal, with the expectation that it would be declined, and that the declination would afford an excuse for its insertion in popular journals. It was, however, accepted and published together with comments by the editor. The result was a combination of several of those who signed the protest to refuse professional association with Dr. White and the editor. Newspaper communications then appeared, intended to excite public indignation against the author of what was denounced as an outrage upon decency. In a so-called religious weekly paper a most scurrilous article appeared, and it was ascertained that after the types of the article had been distributed, one of the most active of the enemies of the college had paid for its being printed anew, and had purchased a large number of copies which he had sent throughout the country. Dr. White then appealed to the Grand Jury of the county, and an indictment for libel followed. The trial was a *cause cèlébre* in which the facts were correctly stated under oath, and, with the testimony of eminent medical men, laid before the profession and the public. The triumph was complete, but I should not refer to these reminiscences except that they serve to illustrate the character of the man, who was the object of professional jealousy, and, also the truth, that persistence in right convictions will in the end overcome unworthy opposition.

In this connection may be mentioned an act which illustrated alike his ability as a teacher and his generosity. In 1870 the late Professor George T. Elliott was stricken with paralysis. The late Dr. Foster Swift was appointed by the Faculty of the Bellevue Hospital Medical College to give his course of

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lectures on obstetrics. At the beginning of the lecture session, Dr. Swift was compelled to seek a more genial climate, for the restoration of his own health. The College was placed in an embarrassing situation. Dr. White was applied to in the emergency. He at once consented to give the course, declining even the request that his expenses be borne by the College, and relinquishing the income to his afflicted friend, the incumbent of the chair. The lectures were in the highest degree satisfactory both to the students and the Faculty.

In recognition of his distinguished position as a practitioner and teacher, he was elected, in 1868, Vice-President, and in 1870, President of The Medical Society of the State of New York. At the meeting of the American Medical Association in 1872, he was nominated by the delegates from the State of New York as a candidate for the Presidency, and in 1878, he was elected one of the Vice-Presidents of the Association. He was elected a corresponding and afterwards an honorary Fellow of the New York Academy of Medicine. He was one of the Vice-Presidents of the Medical Congress assembled in Philadelphia, in 1876.

Dr. White's manifold active duties did not prevent a diligent study of medical works, more especially those treating of subjects pertaining to the department of medicine to which he was specially devoted. He contributed important improvements in practice. One of these, deserving particular mention, was the restoration of the inverted uterus, in cases in which this distressing condition had existed for long periods. Prior to his demonstration of the successful treatment of these cases, they had been regarded as hopeless. The cases in which under his treatment restoration was effected, embraced instances in which the inversion had existed for seven, fifteen and twenty-two years. He was the first to demonstrate the feasibility of the operation, two of his cases having been published before the cases reported by Tyler Smith, of London, on behalf of whom priority has been claimed.

Another improvement which may be mentioned related to construction of obstetrical forceps. During the last twenty years of his life he devoted much attention to ovariotomy. He performed this operation in more than one hundred cases, the last operation having been performed shortly before his death. His reputation as an ovariotomist, based on the suc-

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cess of his operations, led to his being called to operate in distant parts of the country.

He had but little leisure for literary composition, but he contributed from time to time, articles for medical journals and addresses. He entertained at times the idea of preparing a text-book of midwifery. No one in the country was more competent than he to give sound, practical instruction in that department of medicine, and had he entered upon the work, his pertinacity of purpose would have ensured its completion.

The Buffalo Medical and Surgical Journal, the American Journal of Medical Sciences, the Transactions of the American Medical Association, of the American Gynæcological Society, of the International Medical Congress of 1876, at Philadelphia, and of The Medical Society of the State of New York, contain valuable papers contributed by him. He was the author of the articles on pregnancy in Beck's Medical Jurisprudence, edited by the late Prof. Gilman; and of the life of Bard, in the Lives of Distinguished American Physicians and Surgeons, edited by Prof. Gross.

As a speaker and debater he was ready, cogent and courteous. He participated largely in oral discussions at the meetings of the different associations with which he was connected. What he said was always to the point, and always commanded respectful consideration. His opinions on scientific questions and those of polity, well-formed and well-maintained, never failed to have much influence on the minds of others.

He was always ready for active efforts in behalf of institutions for medical relief and for clinical instruction. He co-operated actively in the establishment, by the late Bishop Timon, of the Buffalo Hospital of the Sisters of Charity, the Maternity and Foundling Hospitals, and of the Providence Asylum for the Insane. The inception and the localization of the State Lunatic Asylum in Buffalo were very largely and perhaps chiefly due to him. Of this institution he was from its foundation a manager and afterward the President until, shortly before his death, he felt compelled by the state of his health to relinquish the duties incident to that office. Nor were his interest and activity limited to medical institutions. A zealous member of the Protestant Episcopal Church, he was active in behalf of all the charitable organizations connected with that denomination, and to him, more than to any other of

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its citizens, is Buffalo indebted for the erection of one of its finest church edifices. He had pride in everything relating to the prosperity and welfare of Buffalo. He was one of the founders of the Young Men's Association, of the Academy of Fine Arts, and of the Historical Society in that city. He was eminently a public spirited citizen. Sanitary regulations and all improvements having reference to the comfort and the beauty of the city, were sure to enlist his sympathy and co-operation. He co-operated actively in the efforts which secured for Buffalo its magnificent Park. In the erection of the finest business edifice in Buffalo, which was completed shortly before his death, he was, as I know, actuated by a desire to leave a memorial which would be ornamental as well as useful to the city, where by his prudence and sagacity his fortune had been acquired.

Dr. White furnished an instance, certainly rare in this country, of wealth acquired by the practice of medicine. A pecuniary independence entered into his resolves at the outset of his professional life. No one was more ready than he to heed the dictates of true charity in the bestowal of charitable services; but he held that, in the absence of these dictates, medical, not less than other services, should be pecuniarily requited. He was outspoken as regards this rule of conduct. He often expostulated with his professional brethren for their neglect of self-justice in this respect. He argued that not only individual interests, but those of the profession were injured by an assumed indifference, so common with physicians, to a proper compensation for their labors. He contended that the effect was an undervaluation, in the minds of patients, of the services which they had received. At the same time, he was not less opposed to extortion, and it could not be said of him that he took an ungenerous advantage of circumstances by claiming inordinate fees. To do this would have been repugnant alike to his sentiments and his regard for justice. He did not become rich by parsimony. Without ostentation, his family lived in a manner befitting his wealth and social position. The hospitality which his estimable and accomplished wife, as well as himself, knew so well how to bestow, was unbounded. Twice they traveled abroad, combining with recreation the acquirement of useful information,

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and tearing himself away from his labors at home, he visited, at different times, every portion of our own country.

In this biographical sketch of my departed friend, I have given the salient points in his life and character. They show superior intellectual endowments and attainments, united with fixedness of purpose, perseverance, good judgment, tact, unusual executive ability and rectitude, mental qualities which ensure success and usefulness in this world. These qualities of the mind, to which were added vigorous health and physical endurance, could not fail to secure success in medical practice, as regards not only obtaining and retaining patients, but in the management of cases of disease. In this latter sense of the term, I can speak of his success from ample personal knowledge. He investigated cases carefully, but reached conclusions with promptness and decision. He had no confidence in an intuitive ability to judge of diseases. In his therapeutics he was prompt and decided, without being rash or unduly bold. In the management of cases he was not unduly affected by unfavorable possibilities or probabilities. His attention was more directed to those which were favorable. He was always hopeful for the best, and as long as there was any ground for hope, he never relaxed his efforts. He acted under a deep sense of responsibility to his patients. No one ever accused him of indifference or neglect. These professional traits secured the fullest confidence on the part of his patients. Extraneous methods to possess their confidence were to him not needed. These he held in contempt. In his bearing towards his patients he was independent. He was not a suppliant for confidence. He demanded it as a condition for assuming the responsibilities connected with the management of cases of disease. Of his success as a surgeon I must speak from the testimony of others. The important operations performed by him were chiefly in gynæcological surgery. They embraced, in addition to the large number of ovariotomies already mentioned, all the operations in this province of surgical practice. Quoting from an article *in memoriam*, from the pen of Dr. E. N. Brush, contained in the American Journal of Insanity, Oct. 1881 :

"As an operator he was conservative yet bold, and with a fertility of resource which enabled him to readily meet emergencies as they arose. In the conduct of an operation he

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sought and listened to the suggestions of his assistants and others connected with the case, but, a method of procedure once determined upon, he assumed the entire direction, and expected of his assistants, to whom he carefully explained in advance all that he might desire, a prompt anticipation of his wishes without further suggestion from him. His manner towards his patients was such as to inspire confidence. He was accustomed to say: 'Unless I can have your faith that I am to do the best I can for you, I do not wish to do anything.' He explained frankly the results to be expected, and the risks to be incurred, to each patient."

I borrow from the same gracefully written article the language, and the quotation descriptive of his personal appearance:

"Dr. White possessed the advantages of a tall and commanding figure, and a countenance which inspired confidence while insuring respect. His years sat lightly upon him. His

> 'Was a stature undepressed in size,
> Unbent, which rather seemed to rise,
> In open victory o'er the weight
> Of seventy years to loftier height.'"

It remains to speak of his social and domestic relations. He was blest with that precious gift of Providence, a cheerful temperament. All his friends will recall the heartiness of his habitual greeting. His cheery words and manner made his companionship most agreeable. With the capability of being stern and severe, his friends could always rely upon his geniality. His disposition was devoid of moroseness. He was a steady friend, and always ready to recognize the obligations of friendship. An inflexible opponent, he was not disposed to animosity. He could easily forgive injuries. It gave him great satisfaction to be useful to his friends and particularly to his medical brethren. He had a certain degree of pride as well as pleasure in pointing the way out of financial and other difficulties, and in exerting himself in behalf of those who sought his assistance. His aid and counsel were much sought after by those in trouble. He once said to me "I find that the persons who have been accustomed to abuse me come to me whenever they get into a scrape." And they, as well as his friends, could count upon his assistance. In social intercourse he was not less considerate of the feelings

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of others than sensitive as regards his own feelings. Although indefatigable in prosecuting his own interest, he rejoiced in opportunities for promoting the interest of others. His home was made happy by his genial disposition and his affectionate relations with his family. Quoting the words of a member of his household, "whenever he entered the house cheer came with him." His tastes and habits were thoroughly domestic, his highest enjoyments were associated with home life.

Death came to him at an age when it is considered that, to live much longer is to encounter mental and physical infirmities, which render our present existence undesirable. But his powers of body and mind were so well preserved, that his departure seemed untimely. During the past summer his health had suffered apparently from overwork and the unusually hot weather, but he appeared to have recuperated after spending a few weeks in the White Mountains, and he returned to his usual routine of labor. The giving away of life was sudden, brief and unexpected. It may be said of him that he died in harness, and I feel assured that his choice would have been so to die. He was spared the trial of the knowledge of the existence of a disease progressing slowly but surely to fatal termination. His last short illness was unattended by much suffering. He had made every preparation for death whenever it might come. His mind was unclouded up to the last hours of life. For these sources of consolation, they who remain to mourn for a temporary separation from one who has been called to another existence before them, have reason to be grateful to the divine disposer of human events. To him was vouchsafed a long, and useful and honorable career fraught with happy memories. In this reflection there is much to console his surviving relatives; but it is a saying not less true than trite, that in order to be reconciled to such afflictions, a higher than human power is to be invoked.*

*When this memoir was written, the last sentence contained the expression "the bereaved widow and other relatives." It has been necessary to substitute for this expression "his surviving relatives." The late Mrs. White is no longer a bereaved widow. She departed to join her husband January 23d, a little less than four months after his departure.

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II.—BIOGRAPHIC SKETCH OF DR. SENECA BEEBE.

By FREDERICK HYDE, M. D., of Cortland, N. Y. Read before the Cortland County Medical Society, and by it transmitted to The Medical Society of the State of New York.

Mr. President, and Gentlemen of the Society:

Since the last annual meeting of this Society it is obliged to accept the solemn duty of adding to its necrological history the death of Dr. Seneca Beebe, which occurred at his late residence in Marathon, on the 10th day of November, 1881. Dr. Beebe's father, Cary Latham Beebe, was born in New London, Conn. In 1809, he came to Preston, Chenango Co., N. Y. He was soon married to Martha Lewis. He was well educated, of gentlemanly address, and possessed more than average literary ability. Their permanent home was in Linklaen, Chenango county. Four children were born to them here, the eldest, Seneca Beebe, May 25th, 1816.

After receiving such educational advantages, as the district school afforded him at home; he attended a select school at Pitcher, taught by the late R. R. Bourne, Esq. He commenced the study of medicine with Dr. Lyman Eldredge, then a leading practitioner in Cincinnatus. He taught school in Taylor, Pitcher and Pharsalia, acquiring the reputation of a successful teacher, and in the mean time pursuing his medical studies.

Well do I remember, in the autumn of 1841, a company of enthusiastic young men of Cortland county, first embarking in the study of medicine, assembled at my house for an early breakfast. How distinctly does host and hostess remember each particular one.

Energetic John Goodyear, mild and devout Hitchcock, earnest and honest Robbins, amiable Finn, ardent Pomeroy, scholarly Ellis, the gentle and refined Curtis, and last but not least, good humored, witty Seneca Beebe. While all were full of hilarity and youthful vivacity and ambitions, Beebe seemed the life of the company. He had an overflow of animal spirits, which spent itself in innocent mirth, and had a certain sort of virtue in it, amalgamating the group as one.

As no railroad at that day reached Cortland, the young gentlemen who had met here with a unanimity and pluck commendable in our American youth, looking to economy and sociality, had chartered a team to take them through to

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Geneva Medical College in a day, and so agreed upon a merry breakfast before the sun was up, for merry I believe it would have been, though the fare had been ever so plain and scant.

Seneca Beebe graduated in medicine at Geneva Medical College Jan. 23, 1844, and commenced the practice of medicine in McDonough, Chenango county, in the spring following, succeeding Dr. Milton Mason.

He was married March 4th, 1846, to Louisa Pinckney Hill, eldest daughter of the late John F. Hill, of McDonough. Dr. Beebe had three children, John F. Beebe, who died in infancy; Grace Beebe Stone and Henry Latham Beebe, who with his mother, Mrs. Louisa Beebe, are still living. Dr. Beebe was never a member of any church. He reverenced religion, and had a firm hope in a life hereafter. He practiced medicine in McDonough fourteen years; he then took a vacation of one year, residing in Norwich, in which time he attended a course of lectures in the city of New York, after which he resided in Hamilton, Madison county, a little less than a year. Strong family ties called him nearer to his paternal home, which induced him to locate and resume the practice of his profession in Cincinnatus, the place of his early medical pupilage, where he remained in the active duties of his profession sixteen years. His desire to avail himself of railroad facilities, induced him, (as he told the writer,) to remove to Marathon, where he pursued his profession to within a few months of his death.

His society relations with the medical profession were as follows: He became a member of the Chenango County Medical Society in 1844. The society honored him with its presidency, appointed him a delegate to The New York State Medical Society, and in 1858 he was elected a permanent member of the latter society, in the sessions of which, some of its members who survive him will call to mind many delightful reminiscences of our deceased brother.

Soon after Dr. Beebe came to Cincinnatus to reside he joined the Cortland County Medical Society; was its President in the years of 1864–65. Of his fidelity to the interests of this society its members will bear ample testimony. Dr. Beebe was endowed liberally with positive qualities, manifest alike in professional and non-professional life, and yet who had fewer enemies than he?

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While the writer of this sketch and all others whose good fortune it was to know Dr. Beebe are deeply bereaved because he is no more with us, we rejoice as we speak and write of him, that no part of his life's history needs to be left unrecorded or forgotten, for fear of marring the beautiful symmetry of an upright life, or that of the "good physician."

Dr. Beebe's mental and physical organizations were well adapted to the physician's vocation. He was full of well-tempered, native cheerfulness, which he carried with him in all the trials of the sick room; never by his own despondent demeanor bedimming the feeble hope of relief and recovery in the minds of his patients; and while his radiant face and kindly words gave courage to nurse and watching kindred, his sympathies were keenly alive to all the suffering committed to his professional care. Allying himself early in his professional life with the associate relations of the medical profession, he imbued a growing, sacred regard for the ethical requirements of his calling, which, with him, were more inviolate, if possible, than the formulated written code. He was social in all his relations in life.

Those who knew him well will remember how easily, at the right time, his sparkling humor would give zest to the occasion, unconscious himself that his own corruscations had made luminous everything around him.

Dr. Beebe believed in the possibilities of still higher triumphs for the medical sciences. He was a close stickler for the old and new in medicine and surgery, and held that those who devoted themselves exclusively to their study and observations were qualified to adjust the seeming discrepancies of professional practice, and keep it in the line of its highest achievements.

In our professional intercourse who of us all were a better type of the model physician than him whose death we mourn, as we look upon his vacant seat in this society to-day. In our investigations at the bed-side of patients with Dr. Beebe, who can say that in all duties of the counsel room he ever did an act, or uttered a word, detracting in the least from the honor and sanctity of the place. His opinions were plainly and truly expressed, and when he was in doubt about a point in diagnosis, or a therapeutic measure, he confessed it frankly,

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preferring to seek more light rather than to proceed upon doubtful premises.

A veteran member of the Chenango County Medical Society and professional neighbor of Dr. Beebe, in referring to the latter's relations to him while practicing in McDonough, says: "He was a high toned man and good practitioner. He was ever my particular friend." Who of our fallen brothers, professional neighbors, will not delight in confirming the words of the medical sage of the Chenango Valley.

Remembering the contiguity of the few localities in which Dr. Beebe's entire professional life had been spent, it is strange that it should have left so many enduring way marks filled with hallowed memories. As we contemplate the professional life of our departed friend so full of consoling recollections, with so many traits of character worthy of our imitation, let us be moved by his example to make our lives such that, when our work is over here, it may be recorded of us as of him, that the medical profession and the world have been the richer for our service.

Let us strive to be faithful in the "few things" given us to do, remembering ever, that the Great Master sees us, and upon His authority we are assured, so long as we do our whole duty, we are on the threshold of the better home.

III.—BIOGRAPHICAL SKETCH OF DR. LAKE I. TEFFT.

By ISRAEL PARSONS, M. D., of Marcellus, N. Y. Read before the Onondaga Medical Society, and in accordance with its vote, transmitted by its Secretary to The Medical Society of the State of New York.

The late Dr. Lake I. Tefft was born in the town of Greenwich, Washington County, State of New York, March 16th, 1797. His parents were of New England origin, and his grand parents on both sides were actively engaged in the Revolutionary struggle. He early obtained an excellent common school education, and when quite young engaged in the business of teaching. With the means thus obtained, he again added to his stock of knowledge, and finally in the spring of 1818, he entered as a student of medicine the office of Drs. Pierce and Brisbin, who at that time were two noted physicians in the village of Schuylersville, Saratoga county. Here

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he continued for three years, and in the mean time supported himself by filling the office of private tutor for the family of the late Philip Schuyler, Esq., who at that time owned and occupied the famous Schuyler Manor House at Saratoga.

In 1821–2 he attended a course of medical lectures in the College of Physicians and Surgeons, in the city of New York, where he enjoyed the instructions of Professors Hoosack, Mott and Mitchell, and others of the world-wide reputation in that day. He returned to Schuylersville in the Spring of 1822, was licensed to practice medicine and surgery by the Saratoga County Medical Society, and immediately entered into a co-partnership for one year with Dr. Brisbin, the junior member of the firm, formerly his preceptors. At the expiration of that year, in April, 1823, he went to "the West" (as Central New York was then called) in search of a wider field for active life. He located first at Camillus, but after a brief stay, removed to the then flourishing village of Marcellus, and bought out the late Erastus Humphreys of that place. Here he at once entered upon a large and lucrative practice, which he perseveringly followed until the 25th December, 1849, when he relinquished general practice, and afterwards was only ready to go as counsel or to meet emergencies. At this period he turned his attention particularly to agricultural pursuits, for which he always cherished a passionate fondness.

In 1865 he sold out his interests in Marcellus and removed to the city of Syracuse, where—in the words of another, "in dignified retirement he spent the remainder of his life." Dr. Tefft was married in 1823 to Miss M. Carrington, daughter of the late —— Carrington, Esq., of Mechanicsville, N. Y. Mrs. Tefft, and their daughter, the wife of the Hon. Nelson G. Kennedy, of Syracuse, survive him.

Dr. Tefft was an ardent lover of his profession, and during the long period after his retirement, he manifested the deepest interest in all that related to its improvement and standing with the public. "He belonged," again to quote the words of another, "emphatically to the old school of gentlemanly doctors, of the big wig and gold-headed cane stamp, and was ever ready to do battle for the *otium cum dignitate* of the profession." He was an active member of our County Medical Society, and at different times filled most of the offices in its gift. He was an early and constant member of

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The State Medical Society, first as a delegate from our County Society, and subsequently as a permanent member. In 1871 he was elected its Vice-President. In the early days of this society, to be present at its meetings, had to be attended with not a little sacrifice of both time and money, to one situated as Dr. Tefft was from the Capitol. Staging at five cents a mile, and riding night and day at the rate of one hundred miles in twenty-four hours, is in striking contrast with our present opportunities. But Dr. Tefft did not hesitate to make the sacrifice; he was a liberal man, above the average in this direction. It seemed to be his pleasure thus to do.

As a citizen he was deservedly popular; was twice elected from this county a member of the legislature, in 1844–45, and held important positions in different committees of that body.

He attended the first meeting that organized our American Medical Association, and was early elected a permanent member. He has attended most of its meetings since. In those meetings he was very happy in making personal acquaintances with men of importance, from different parts of the United States, and very often with young, men for whom he manifested a proclivity.

His last important trust was as delegate from our State Medical Society to the International Congress, held at Philadelphia in 1876. The fatigues and privations, incident upon so large a gathering, impaired his hitherto firm health, and in the winter of 1877, he was prostrated by an attack of acute rheumatism, which so weakened his constitution that, after a tedious valetudinarianism of nearly three years, most of the time in bed, death came to his relief. The immediate cause of death was acute diarrhœa. His death occurred on the 10th day of May, 1880, in his 84th year.

The remembrance of Dr. Tefft is distinct to the writer from his earliest boyhood years, first, in two severe periods of sickness, when the Doctor was his attending physician, later in life, as his preceptor in the study of medicine, still later, his copartner in its practice, and afterwards his ever abiding counsellor.

The Doctor was possessed of a well-balanced mind, clear perceptive faculties, and of sound judgment. He was an unusual discriminator of disease, and in prognosis seldom failed. Moderation and caution, with industry and persever-

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ance, made him a safe practitioner. Though somewhat slow in forming an opinion, he was tenacious in holding it. His cases of sickness were well studied. He was a man of great powers of endurance; the summer's heat or winter's cold never disabled him. His favorite and usual mode of riding was on horse-back. Though, "early to bed and early to rise, makes a man healthy, wealthy and wise," may not have been his motto, yet it was his practice; the Doctor was *healthy*, *wealthy* and *wise*.

Dr. Tefft was a good financier. He possessed what might be termed a double power, and what is true of very few practicing physicians, viz: seeking the highest interests of his patients so far as healing them of the maladies was concerned —entering with a true and kind heart into their griefs and sorrows—while at the same time he did not permit this so to blind him to his own interests, but that he was always conscious of their obligations to him in dollars and cents.

He appreciated and sought to sustain the true dignity of his profession, and knew full well its worth and importance to the community. He was prompt in presenting his bills, and indefatigable in the pursuit of doubtful bills. Being affable and polite, not given to circumlocution, his presence as a collector was quite acceptable to the well-disposed portion of his patrons. He knew the value of a penny, and its legal use; and one of his rules in finance was to let none of his surplus money lie idle; and as little of it as possible invested without ample security. Whenever an account reached its allotted period for collection, and could not consistently be paid, he permitted it to be put into a note where interest should be accruing. With such precision did he pursue this course in life, that from a penniless beginning (except the fund of medical knowledge which he had treasured up,) he retired in comparative affluence. Yet I think he could have conscientiously said that, all this regard for his own interests had probably never detracted from his attentions to the sick.

The Doctor was a social man. Fond of good society, he favored every measure that would contribute to its elevation. More than once he consented to take charge of a large class of young ladies and gentlemen, who had organized for the purpose of studying botany. In his days of practice he had more than the average number of medical students under his care.

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He urged upon young men the importance of thoroughness in their course of study.

While a resident of Syracuse, (the last fifteen years of his life,) he was alive not merely to the material growth of the city, but also to the additions made to its medical ranks, from time to time, by the arrival of graduates from our medical colleges.

As years rolled along, his interest in our medical society deepened, until with his compeer, Dr. Jehiel Stearns, he was crowned victor—successful toiler in life's work. This proved to be his last meeting with this society. And, to close, I would say that, the crowning beauty of his life was his consistent christian character during the last twenty years.

IV.—OBITUARY NOTICE OF DR. LEVANT B. COTES.

By WILLIAM WARREN POTTER, M. D., of Buffalo, N. Y.

Levant Ballard Cotes was born in the village of Springfield, Otsego county, N. Y., July 15th, 1801, of early English ancestry. His early education was under private tutors and at academies, principally Fairfield Academy, N. Y. He entered the College of Physicians and Surgeons, also located at Fairfield, Herkimer county, N. Y., where he graduated January 21st, 1826, his diploma bearing the distinguished names of Westel Willoughby, T. Romeyn Beck and James McNaughton. He settled in Batavia after graduation, where, for upwards of fifty years, he enjoyed a lucrative and successful practice, largely surgical and obstetrical. He was for more than half a century a member of Genesee County Medical Society, during which time he had occupied its several offices; was a permanent member of The Medical Society of the State of New York, elected in 1860; and of the American Medical Association, elected in 1856. He has contributed papers, on medical subjects to the local and State societies, and also reports of cases, among the latter being one on "Urethrocele, complicated with Disease of the Bladder and Kidneys." (The patient was about to succumb to the malady, when he opened the bladder at the trigone space, and established a permanent fistula until all vestige of the disease had disappeared.) This case was

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published in the Transactions for 1874. Largely through his influence in bringing before the State society the subject, a commission on lunacy was established by the Legislature. He was curator of the medical department of the University of Buffalo for twenty-five years; was formerly postmaster of Batavia, and for the last ten years of his life was U. S. Examining Surgeon for Pensions.

In 1827, he married Miss Eliza A. Ketcham, who died in 1872.

Dr. Cotes continued in the active practice of his profession until about four years prior to his death, when failing health warned him to relinquish the most laborious part of his duties; he, however, still gave the benefit of his large experience and wise judgment, in the way of consultations, up to very near his end, which came quietly and peacefully, at his residence in Batavia, N. Y., September 11, 1880, its immediate cause being apoplexy. He leaves two sons, the eldest, Dr. John R. Cotes, a physician of thirty years experience, still continuing the practice of medicine at the family residence.

Dr. Cotes was a man respected by a large circle of acquaintances, and endeared to the community where he lived so long, as only a man can be who has ministered tenderly and skillfully to the sufferings of his fellow-men for nearly two generations.

V.—OBITUARY NOTICE OF DR. JOHN F. WHITBECK.

By H. H. LANGWORTHY, M. D., Rochester, N. Y.,

In the death of Dr. John F. Whitbeck, of Rochester, N. Y., this Society has lost one of its most energetic and intelligent members. In the city where he was best known no eulogistic words are necessary. The writer can appropriately use the words of Horatio, and say, "Here cracks a great and noble heart." Loving the profession to which he had devoted himself, his zeal in the practice of it knew no abatement, and truly it can be said of him that he exhausted his vital energies to the last degree, that his skill might be of benefit to the less fortunate of his friends and patrons.

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Associated, as the writer was with him, in the surgical wards of the Rochester City Hospital, during the last fourteen years of his life, he is abundantly able to speak of his professional and social qualities As a man, Dr. Whitbeck was the peer of all, and his medical skill was found equal to all emergencies, and he was never appalled at any aspect of injury or disease brought to his attention

To the poor and friendless his services were freely given, and it would be easy to cite many cases of this kind, where he had exercised the most remarkable self-sacrifice. It may be truly said that the latter trait of his character was carried to a fault, and he often gave his services without fee or reward when he could illy afford the time.

So devoted was he to his work that when disease began to lay its icy fingers upon him, and his friends tried in vain to prevail upon him to look more to himself, he kept going up to the moment when over-powering debility obliged him to confine himself to the house. He then rapidly grew worse, until on the 8th day of December, 1880, he quietly ceased to exist.

Dr. Whitbeck was born in Claverack, Columbia county, N. Y., on the 27th day of September, 1812, and was consequently at the time of his death 68 years of age. His family took up their residence in Herkimer county, where the subject of this sketch grew up and pursued the study of medicine, finally graduating at the University of Pennsylvania when 23 years of age. He began his practice at Avon, Livingston county, N. Y., where he married Miss Elizabeth Ward in 1836.

Shortly afterwards he removed to Lima, in the same county, where he resided for a short time, and then, at thirty years of age, took up his residence at Rochester, N. Y., where he continued to practice his profession until death ended his labors.

In 1862, Dr. Whitbeck entered the army as surgeon of the 108th Regiment New York Volunteers, and, after about one year of distinguished service, was compelled to resign on account of illness.

His first wife died in 1853, and about one year afterwards he married Miss L. E. W. Smith.

In 1866, the subject of this sketch was appointed one of the surgeons of the Rochester City Hospital, which position he held up to the time of his death, a period of fourteen years.

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He was President of the Monroe County Medical Society, and also of the Rochester City Medical Society.

In the year 1868, he was elected a permanent member of The Medical Society of the State of New York.

He was preeminently the friend of the student and young practitioner, and there are at least one hundred and fifty physicians now in practice to whom he has been a preceptor. His only son, Dr. John W. Whitbeck, is now an eminent young practitioner of Rochester, and one of the Medical Staff of the Rochester Hospital.

As before said it seems like a superfluous task to say more than the words that Dr. Whitbeck is dead. His deeds are his fittest eulogy, and the impressions stamped by his friendship and his skill will live longer than words in books or manuscript, or epitaph carved in monumental brass.

VI.—OBITUARY NOTICE OF DR. WILLIAM S. HOFFMAN.

Communicated by the Cayuga County Medical Society.

Dr. William S. Hoffman was born in Shawangunk, Ulster county, N. Y., May 23d, 1816. Removing with his parents to Cayuga county, he read medicine with Dr. Dodge of Union Springs, in that county, and after attending a course of lectures in New York City, also at Geneva, was, on the 26th of February, 1842, licensed to practice by the State Board of Medical Censors. He at first settled in the village of Cayuga, and in 1843 married Miss Mary A. Alleman, of Waterloo, who, with one son, survives him. Removing the following year to Corning thence to Lodi, he finally made Port Byron his home in 1847, and there continued till his death which, after severe and protracted suffering, occurred on the 8th of January, 1882, from valvular disease of the heart.

Dr. Hoffman belonged to the class of physicians that ever responds to the calls of the sick and suffering. For many long years, through summer's heat and winter's cold; by night and by day; over rough paths and even; whether well or weary—ignoring personal ease, comfort or emolument—he

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never failed nor neglected his patients. Necessarily much occupied in the practice of his profession, the doctor had comparatively limited time to devote to current medical literature, but, possessing an acute and discriminating mind, he was enabled, in his extensive and varied field of observation, to establish, deservedly, the reputation of not only an honorable but a successful practitioner.

Elected permanent member of the State medical society in 1870, he took special interest in, and, as punctually as practicable, attended its annual sessions, as also those of the N. Y. Central and Cayuga County Societies.

A life-long and consistent democrat, serving one term as post-master of his village, he never suffered politics or other extraneous considerations to interfere with his professional duties. His religion was his own.

VII.—BIOGRAPHICAL SKETCH OF DR. JAMES P. BOYD.

By S. H. FREEMAN, M. D. and THOMAS HUN, M. D., of Albany, N. Y.*

A life spent in the alleviation of human suffering is itself, a grand memorial; but it is only after the course is finished that the salutary services in the silent profession and the added inspiration and influence of an exalted character and a noble life are fully comprehended and appreciated.

> "Death is the crown of life;
> The king of terrors is the prince of peace."

The subject of this memorial sketch was born in Albany on the 24th of February, 1804. He was the son of Peter Boyd, a native of Albany, [an eminent merchant of Scotch descent.]

[The Doctor received his academical education in the Albany Academy, at that time under the superintendence of Dr. T. Romeyn Beck. In after life he retained a strong attachment to this school of which he was for many years, and up to the time of his death, a trustee. He commenced his medical

*Two notices of Dr. Boyd were referred to the Committee of Publication. The one by Dr. Freeman was selected for publication, as going somewhat more fully into details than the other. An occasional item, of additional information from Dr. Hun's paper, is inserted in brackets.

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studies in the office of Prof. James McNaughton and attended medical lectures in the College of Physicians and Surgeons, of New York, and in the University of Pennsylvania, from which latter institution he received the degree of Doctor of Medicine in 1825.

He commenced the practice of medicine in the city of New York, but after a short time he removed to the city of Albany and formed a partnership with Dr. Jacob A. Wing. A few years later the partnership was dissolved, and the doctor continued in practice till his death in 1881.]

He possessed a good constitution, scholarly tastes and industrious habits, and to large, natural endowments he united culture and grace of deportment.

[Dr. Boyd's professional knowledge was extensive and accurate. He was a careful observer of disease, and judicious practitioner. From an early age he acquired an extensive practice with large opportunities for study and observation, which he carefully improved. His practice was not confined to any specialty, but he particularly excelled in obstetrics, and in that department had a large practice, and was often called in consultation in cases requiring instrumental delivery.

As is the case with most men devoted to earnest professional work, his life presents few remarkable incidents; it is a history of daily work and devotion to duty. He gave up little time to recreation, and until the last few years of his life, scarcely even allowed himself a vacation. He was a model of a hard working practitioner, devoted exclusively to his profession. His refined and pleasing address, and amiable temper won the confidence and love of his patients.]

He became a member of the County Medical Society in 1828. He frequently contributed to the interest of its meetings and was in due time the modest recipient of its highest honors; he was many times elected censor, in 1828–29 Secretary, and in 1838–39, President; was elected delegate to The Medical Society of the State of New York in 1852, and became a permanent member in 1859. The early professional career of Dr. Boyd received a very favorable impulse under circumstances of peculiar interest. The Asiatic cholera first appeared on this continent at Quebec, on the 8th of June 1832, and about two weeks later, without having shown itself at any intermediate point, suddenly broke out in Albany. This event at

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once furnished a broad field for active service and skill. The utmost anxiety and consternation prevailed throughout the city. Neither the quarantine regulations, nor the burning of tar and the sprinkling of lime in the streets, seemed to furnish a barrier to its fearful progress, as during the month of July there were reported 387 cases and 136 deaths. The population at this time was twenty-six thousand. During this epidemic Dr. Boyd enjoyed the professional advantage of meeting daily in conference and consultation, the most eminent and experienced physicians of Albany in the then "New City Hall." His native genius and quick perception enabled him to derive practical benefit from these interviews, and by his skillful and watchful care, as well as by his cheering and inspiring presence, he rapidly won reputation and a large and lucrative practice, which he continued to enjoy. Dr. Boyd was heartily interested in the private charities and in all the eleemosynary institutions of the city. He was an active member of the first medical staff of the Albany Hospital. [He repeatedly declined the place of Professor in the Albany Medical College,] of which he was for many years senior member of the Board of Curators. [From an early age he was a communicant in the First Presbyterian church, in which he was an influential and useful officer.]

How greatly he was beloved by his associates there, is attested by the following extract from the minutes of the session:—.

"The surviving members of the session can scarcely find words to record the emotions that agitate their hearts in contemplating the loss of the christian companionship and counsel of their venerated friend and brother in the eldership, Dr. James P. Boyd. Succeeding to an office adorned by his father, for nearly thirty years an elder (as well as trustee) of this church, nothing relating to its spiritual or temporal welfare failed to elicit his fervent prayers and earnest labors. Distinguished in his professional career, honored in his social life, blessed in his religious character, and the like precious faith of the cultured companion of his days, and in seeing that faith perpetuated in all their children, his decease marks the close of a generation of activity in the Master's vineyard. We shall miss his benign presence in the sanctuary, his ministrations at the Lord's table, his voice of prayer and praise in the appointed weekly services, his generous, systematic bestowal of the Lord's bounty. He has passed from our presence into the affectionate rememberance of our entire congregation; from the services in which he delighted here, to the rapturous, unwearying services of the heavenly sanctuary."

An interesting episode occurred about five years ago, on the occasion of his retiring from the onerous duties of professional

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life. He had just completed half a century of successful practice, when the Medical Society honored itself by presenting him a beautiful testimonial of affection and respect. It was a rare and joyous occasion. Since that time he had gradually withdrawn from public life, and it was pleasant to observe that in the quietude of his home life he found that solace and comfort in the contemplation of the great verities of eternity which inspired him with a confident and earnest desire to enter upon the life eternal. He died on the 10th of May, 1881.

His wife, [to whom he was married in 1833,] and who gave a beautiful example of a christian life, had, several years since, entered into rest. Two sons and two daughters still honor their memory; one son, John Campbell Boyd, is a minister of the Presbyterian Church, the other, [Prof. James P. Boyd, Jr., of the Albany Medical College,] is in the practice of his profession in the city of Albany.

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Medical Society of the State of New York,

1882.

OFFICERS.

PRESIDENT,
HARVEY JEWETT, Canandaigua, N. Y.

VICE-PRESIDENT,
E. D. FERGUSON, Troy.

SECRETARY.
WM. MANLIUS SMITH, (7 Myers Block,) Syracuse, N. Y.

TREASURER.
CHARLES H. PORTER, (55 Eagle Street,) Albany N. Y.

MEMBERS.

I. DELEGATES FROM COUNTY MEDICAL SOCIETIES.

County.	Names of Delegates.	Post Office.	Term Expires.
Albany.....	J. D. Featherstonhaugh	8 Summit street, Cohoes.....	1885
"	Thomas Helme.....	McKownsville.....	1885
"	Joseph W. Moore...	92 Mohawk street, Cohoes.....	1885
"	Eugene Van Slyke...	320 South Pearl street, Albany.....	1885
Allegany.....	J. H. Saunders.....	Belfast.....	1887
Broome..... ...	L. D. Witherill.....	Union.....	1883
Cattaraugus....	*Not yet elected*.....	——.....	1885
"	" "	——.....	1885
Cayuga.....	Frank Kenyon.....	Auburn.....	1885
"	John Gerin.....	Auburn.....	..1885
Chautauqua....	Harris B. Osborne..	Sherman.....	1884
"	H. R. Rogers.....	Dunkirk.....	1884
Chemung.....	Wm. Woodward.....	Big Flats	1885
Chenango	M. D. Spencer.....	Guilford.....	1882
Clinton.....	L. C. Dodge.....	Rouse's Point.....	1882
Columbia.... .	Thomas Wilson.....	Claverack.....	1886
Cortland.....	Homer O. Jewett ...	Cortland.....	1886
Delaware.....	Ira Wilcox.....	Franklin.....	1883
"	D. H. Mann..... ...	Delhi.....	1883
Dutchess.....	Edwin Barnes..	Pleasant Plains.....	1884
"	Alfred Hasbrouck...	Poughkeepsie.....	1884

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County.	Names of Delegates.	Post Office.	Term Expires.
Erie	A. M. Barker	137 W. Tupper street, Buffalo	1886
"	H. R. Hopkins	164 Franklin street, Buffalo	1886
"	Lucien Howe	5 West Chippewa street, Buffalo	1886
"	F. F. Hoyer	Tonawanda	1886
"	S. E. S. H. Nott	White's Corners	1886
Essex	Conant Sawyer	Au Sable Forks	1884
Franklin	A. M. Phelps	Chateaugay	1883
Fulton	Charles M. Lefler	Gloversville	1884
Genesee	A. P. Jackson	Oakfield	1887
Greene	C. H. Chubb	Palenville	1884
Hamilton	(*Has no Medical Society.*)		
Herkimer	A. Walter Suiter	Herkimer	1886
Jefferson	Wm. C. Bailey	Adams Centre	1884
"	J. D. Spencer	Watertown	1884
Kings	J. Byrne	314 Clinton street, Brooklyn	1882
"	E. N. Chapman	95 Pierrepont street, Brooklyn	1882
"	G. G. Hopkins	375 Grand avenue, Brooklyn	1882
"	Charles Jewett	307 Gates avenue, Brooklyn	1882
"	A. Otterson	179 Washington street, Brooklyn	1882
"	F. W. Rockwell	6 LaFayette avenue, Brooklyn	1882
"	J. D. Rushmore	129 Montague street, Brooklyn	1882
"	J. C. Shaw	177 Schermerhorn street, Brooklyn	1882
"	S. Sherwell	186 Remsen street, Brooklyn	1882
"	W. Wallace	183 Congress street, Brooklyn	1882
"	B. F. Westbrook	174 Clinton street, Brooklyn	1882
"	J. S. Wight	115 Pacific street, Brooklyn	1882
Lewis	C. E. Douglas	Constableville	1884
Livingston	J. W. Gray	Avon	1887
Madison	A. D. Head	Eaton	1886
Monroe	T. B. Collins	74 East Main street, Rochester	1887
"	A. Mandeville	62 East Main street, Rochester	1887
"	Wm. F. Sheehan	45 Lake avenue, Rochester	1887
Montgomery	F. G. Buckbee	Fonda	1887
New York	F. H. Bosworth	26 West 46th street, New York	1883
"	L. D. Bulkley	1 E. 33d street, New York	1883
"	C. S. Bull	47 E. 23d street, New York	1883
"	W. M. Carpenter	123 E. 25th street, New York	1883
"	G. H. Fox	18 E. 31st street, New York	1883
"	V. P. Gibney	135 E. 42d street, New York	1883
"	W. R. Gillette	149 West 23d street, New York	1883
"	A. McL. Hamilton	43 East 33d street, New York	1883
"	H. T. Hanks	55 East 59th street, New York	1883
"	E. G. Janeway	51 East 25th street, New York	1883
"	L. Johnson	323 West 27th street, New York	1883
"	A. B. Judson	129 East 17th street, New York	1883
"	Daniel Lewis	147 East 45th street, New York	1883
"	A. V. B. Lockrow	709 Madison avenue, New York	1883
"	W. T. Lusk	47 East 34th street, New York	1883
"	C. W. Packard	937 Park avenue, New York	1883
"	A. C. Post	291 Madison avenue, New York	1883

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County.	Names of Delegates.	Post Office.	Term Expires.
Niagara	B. Robinson	37 West 35th street, New York	1883
"	E. H. M. Sell	51 West 35th street, New York	1883
"	S. Sexton.	12 West 35th street, New York	1883
"	F. R. Sturgis	16 West 32d street, New York	1883
"	R. W. Taylor	40 West 21st street, New York	1883
"	J. S. Warren.	204 West 38th street, New York	1883
"	D. Webster	266 Madison avenue, New York	1883
Niagara	M. S. Kittinger	Lockport	1884
"	W. I. Ransom.	Lockport	1884
Oneida	J. S. O'Hara	Utica	1885
"	H. C. Palmer	Rome	1885
"	George Seymour	Utica	1885
Onondaga	J. D. Potter	Delphi	1887
"	J. O. Slocum	Camillus	1887
"	Ely Van DeWarker.	45 Montgomery street, Syracuse	1887
Ontario	F. R. Bentley	Cheshire	1884
Orange	John C. Boyd.	Monroe	1887
"	——— ———	———	1887
Orleans	H. C. Tompkins	Knowlesville	1884
Oswego	J. W. Eddy.	Oswego	1887
"	D. T. Whyborn	Cleveland	1887
Otsego	E. E. Houghton.	Schenevus	1885
"	A. S. Seeber.	Milford	1885
Putnam	J. Q. Adams	Carmel	1884
Queens	Jos. H. Bogart	Roslyn	1884
"	Wm. D. Woodend	Huntington, Suffolk Co	1884
Rensselaer	Charles H. Burbeck	Centre Brunswick	1883
"	W. S. Cooper	81 Third street, Troy	1883
"	R. D. Traver	8 Waverly place, Troy	1883
Richmond	Isaac Lea	Stapleton	1885
Rockland	E. H. Maynard.	Nyack	1885
St. Lawrence	J. E. Colburn.	Colton	1886
"	O. J. Hutchins.	Depeyster	1886
"	G. G. Monroe.	Crary's Mills	1886
Saratoga	C. S. Grant.	Saratoga Springs	1885
"	T. E. Parkman.	Rock City Falls	1885
Schenectady	Maurice Perkins.	Schenectady	1885
Schoharie	W. S. Layman.	Schoharie.	1884
Schuyler	S. B. Allen	Burdette	1883
Seneca	Elias Lester.	Seneca Falls	1887
Steuben	Eli Allison.	Wayne	1885
"	M. J. Baker.	Hornellsville	1885
Suffolk	E. F. Preston	Amityville	1887
Sullivan	W. S. Webster.	Liberty	1885
Tioga	George P. Cady.	Nichols	1885
Tompkins	J. E. Beers	Danby	1885
Ulster	E. McKenzie	Port Ewen	1886
"	S. Schoonmaker.	Rosendale.	1886
"	H. R. Winter	Shandaken.	1886
Warren	D. B. Howard.	Warrensburgh.	1884

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County.	Names of Delegates.	Post Office.	Term Expires.
Washington ...	John Lambert.....	Salem.....	1882
" ...	Theod. C. Wallace.	Cambridge	1882
Wayne	Jason Parker.....	Clyde	1886
"	Alex. Sayres.....	Marion	1886
Westchester ...	A. C. Benedict.....	Yonkers	1886
" ...	Arch. M. Campbell.	Mt. Vernon	1886
" ...	Isaac G. Collins.....	Sing Sing	1886
Wyoming	George M. Palmer..	Pike	1883
Yates.....	B. L. Holt.....	Penn Yan	1887

New York Academy of Medicine:

W. R. Birdsall, 144 East 74th street, New York.....1886
Louis Elsberg, 614 Fifth avenue, New York.....1886
Everett Herrick, 126 Madison avenue, New York.....1886
A. M. Jacobus, 212 West 53d street, New York.....1886
C. C. Lee, 74 Madison avenue, New York.....1886

Medical Faculty New York City University:

Alfred L. Loomis, 31 West 34th street, New York.....1882

Bellevue Hospital Medical College:

_____ _____ 1882

College of Physicians and Surgeons, New York:

John G. Curtis, 127 East 35th street, New York.....1884

Long Island College Hospital:

_____ _____ 1884

Medical Department, Union University:

Samuel B. Ward, Albany.....1885

Medical Department, University of Buffalo:

Charles Cary, Buffalo.....1885

College of Medicine of Syracuse University:

Wm. T. Plant, Syracuse.....1885

II. PERMANENT MEMBERS.

For regulations with regard to permanent members, their election, initiation fees, annual dues, etc., see pages 2 and 3 of this volume. Permanent members who neglect to pay their dues for three years, are dropped from the following list till arrearages are paid. [By Laws, chap, VI., section 5.]

In case of the death of any member of this Society, it shall be the duty of the county medical society within the bounds of which he last resided, to transmit to the Secretary of the Society, a suitable obituary notice for publication in the Transactions. [By-Laws, chap. V., section 10.]

Year of Election.	Name.	Post Office.	County.
1876	George Abbott.....	Hamburgh.....	Erie.
1880	Ira H Abell.....	Antwerp.....	Jefferson.
1861	Cornelius R. Agnew.....	266 Madison avenue	New York.
1880	H. R. Ainsworth.....	Addison.....	Steuben.
1877	L. J. Ames.....	Mount Morris.....	Livingston.
1867	W. C. Anderson.....	Stapleton.....	Richmond.
1874	Judson B. Andrews..	Buffalo.....	Erie.

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Year of Election.	Name.	Post Office.	County.
1878	G. W. Avery	Norwich	Chenango.
1868	Alexander Ayres	Fort Plain	Montgomery.
1857	M. M. Bagg	Utica	Oneida.
1874	James S. Bailey	Albany	Albany.
1864	William H. Bailey	Albany	Albany.
1859	John Ball	122 Montague street, Brooklyn,	Kings.
1878	Newton H. Ballou	Mechanicsville	Saratoga.
1869	James L. Banks	79 Fifth avenue	New York.
1855	Fordyce Barker	24 East 38th street	New York.
1868	C. V. Barnett	Coxsackie	Greene.
1867	Lyman Barton	Willsborough	Essex.
1869	Wilson T. Bassett	Cooperstown	Otsego.
1876	Eugene Beach	Gloversville	Fulton.
1876	Frank D. Beebe	Hamilton	Madison.
1880	Michael D. Benedict	Syracuse	Onondaga.
1879	M. L. Bennett	Watkins	Schuyler.
1864	Z. H. Blake	Dansville	Livingston
1876	William N. Blakeman	28 West 37th street	New York.
1862	John Boardman	Buffalo	Erie.
1861	Reed B. Bontecou	Troy	Rensselaer.
1871	Walter Booth	Booneville	Oneida.
1866	Gideon Botsford	Greenville	Greene.
1865	E. W. Bottum	Lyons	Wayne.
1868	J. R. Boulware	Albany	Albany.
1872	Nathan Bozeman	296 Fifth avenue	New York.
1847	George W. Bradford	Syracuse	Onondaga.
1874	Elisha H. Bridges	Ogdensburgh	St. Lawrence.
1879	Z. B. Bridges	Ogdensburgh	St. Lawrence.
1876	Daniel D. Bucklin	Lansingburgh	Rensselaer.
1869	Daniel W. Burdick	Homer	Cortland.
1876	J. H. Hobart Burge	132 Montague street, Brooklyn,	Kings.
1854	George Burr	Binghamton	Broome.
1875	M. H. Burton	Troy	Rensselaer.
1866	J. E. Casey	Mohawk	Herkimer.
1881	Frederick A. Castle	102 East 57th street	New York.
1881	William Chace	Mayville	Chautauqua.
1877	W. M. Chamberlain	68 West 40th street	New York.
1863	J. K. Chamberlayne	Utica	Oneida.
1878	James Chapman	Medina	Orleans.
1879	Walter B. Chase	636 Willoughby ave., Brooklyn,	Kings.
1878	J. H. Chittenden	Binghamton	Broome.
1868	Alonzo Churchill	Utica	Oneida.
1850	Alonzo Clark	23 East 21st street	New York.
1879	A. S. Coe	Oswego	Oswego.
1867	Darwin Colvin	Clyde	Wayne.
1875	George W. Cooke	Otego	Otsego.
1863	John R. Cooper	Poughkeepsie	Dutchess.
1882	William S. Cooper	Troy	Rensselaer.
1873	J. R. Cotes	Batavia	Genesee.

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Year of Election.	Name.	Post Office.	County.
1870	William H. Craig	Albany	Albany.
1867	H. S. Crandall	Leonardsville	Madison.
1879	J. Mortimer Crawe	Watertown	Jefferson.
1882	Joseph P. Creveling	Auburn	Cayuga.
1879	John Cronyn	Buffalo	Erie.
1876	A. H. Cruttenden	Bath	Steuben.
1876	A. S. Cummings	Cayuga	Cayuga.
1882	F. C. Curtis	Albany	Albany.
1859	Alexander J. Dallas	Syracuse	Onondaga.
1881	John C. Dalton	43 West 48th street	New York.
1879	John Davidson	Hempstead	Queens.
1868	H. D. Didama	Syracuse	Onondaga.
1879	Theodore Dimon	Auburn	Cayuga.
1873	J. S. Dolson	Bath	Steuben.
1876	George Douglas	Oxford	Chenango.
1878	H. G. DuBois	Camden	Oneida.
1881	Wm. H. Dudley	301 Henry street, Brooklyn	Kings.
1856	J. P. Dunlap	Syracuse	Onondaga.
1873	George W. Earll	Skaneateles	Onondaga.
1870	Ellsworth Eliot	48 West 36th street	New York.
1882	Louis Elsberg	614 Fifth avenue	New York.
1881	Smith Ely	Newburgh	Orange.
1875	William S. Ely	Rochester	Monroe.
1871	Thomas Addis Emmett	89 Madison avenue	New York.
1879	Horace P. Farnham	36 West 40th street	New York.
1882	Lucius E. Felton	Potsdam	St. Lawrence.
1876	E. D. Ferguson	Troy	Rensselaer.
1857	George J. Fisher	Sing Sing	Westchester.
1873	William Fitch	Dryden	Tompkins.
1855	Austin Flint	418 Fifth avenue	New York.
1832	Joel Foster	265 Fourth avenue	New York.
1882	George H. Fox	18 East 31st street	New York.
1870	Robert Frazier	Camden	Oneida.
1881	N. H. Freeland	Tarrytown	Westchester.
1862	Samuel H. Freeman	Albany	Albany.
1870	S. H. French	Amsterdam	Montgomery.
1880	P. R. Furbeck	Gloversville	Fulton.
1861	Charles C. F. Gay	Buffalo	Erie.
1875	J. W. S. Gouley	311 Madison avenue	New York.
1858	William Govan	Stony Point	Rockland.
1872	Joshua B. Graves	Corning	Steuben.
1865	John P. Gray	Utica	Oneida.
1858	Caleb Green	Homer	Cortland.
1877	Joseph C. Greene	Buffalo	Erie.
1880	Frederick S. Greene	Coxsackie	Greene.
1871	L. Griffin	Binghamton	Broome.
1876	Desault Guernsey	Amenia	Dutchess.
1855	Luther Guiteau	Trenton	Oneida.
1872	G. L. Halsey	Unadilla	Otsego.

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Year of Election.	Name.	Post Office.	County.
1877	T. Hammond	Dover Plains	Dutchess.
1860	Elisha Harris	65 Bible House, Astor Place	New York.
1875	J. Hasbrouck	Port Ewen	Ulster.
1880	C. R. Heaton	Owego	Tioga.
1873	William H. Helm	Sing Sing	Westchester.
1870	H. C. Hendrick	McGrawville	Cortland.
1878	John H. Hinton	41 West 32d street	New York.
1874	B. L. Hovey	Rochester	Monroe
1868	Samuel T. Hubbard	27 West 9th street	New York.
1872	A. C. Hull	Olive	Ulster.
1854	Thomas Hun	Albany	Albany.
1858	Nathaniel C. Husted	Tarrytown	Westchester.
1874	Alexander Hutchins	796 DeKalb avenue, Brooklyn	Kings.
1872	Edwin Hutchinson	Utica	Oneida.
1878	James C. Hutchison	Troy	Rensselaer.
1864	Joseph C. Hutchison	479 Clinton avenue, Brooklyn	Kings.
1854	Frederick Hyde	Cortland	Cortland.
1875	Abraham Jacobi	110 West 34th street	New York.
1861	J. Foster Jenkins	Yonkers	Westchester.
1860	Harvey Jewett	Canandaigua	Ontario.
1882	Wm. H. Johnson	Port Leyden	Lewis.
1856	James V. Kendall	Baldwinsville	Onondaga.
1880	C. Henry King	Stapleton	Richmond.
1880	Herman Knapp	25 West 24th street	New York.
1857	H. H. Langworthy	Rochester	Monroe.
1881	Henry Lapp	Clarence	Erie.
1878	James R. Leaming	160 West 23d street	New York.
1878	J. K. Leaning	Fly Creek	Otsego.
1875	Joseph Lewi	Albany	Albany.
1867	Jared Linsly	22 La Fayette place	New York.
1868	David Little	Rochester	Monroe.
1872	James L. Little	60 West 40th Street	New York.
1878	Alfred J. Long	Whitehall	Washington.
1849	Dyer Loomis	New Berlin	Chenango.
1882	E. H. Loughran	Kingston	Ulster.
1871	R. Loughran	Kingston	Ulster.
1871	Frank S. Low	Pulaski	Oswego.
1862	E. S. Lyman	Sherburne	Chenango.
1880	E. M. Lyon	Plattsburgh	Clinton.
1877	Henry March	Albany	Albany.
1879	Arthur Mathewson	129 Montague street, Brooklyn,	Kings.
1854	F. T. Maybury	Binghamton	Broome.
1874	Bartholomew G. McCabe	Whitestone	Queens.
1871	S. F. McFarland	Oxford	Chenango.
1872	Leroy McLean	Troy	Rensselaer.
1869	Julius F. Miner	Buffalo	Erie.
1870	E. M. Moore	Rochester	Monroe.
1870	Jacob S. Mosher	Albany	Albany.
1879	B. A. Mynderse	Schenectady	Schenectady.

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Year of Election.	Name.	Post Office.	County.
1875	Judson C. Nelson	Truxton	Cortland.
1863	Jacob Newkirk	Roxbury	Delaware.
1873	Robert Newman	119 West 47th street	New York.
1868	Clark A. Nicholson	Beekman	Dutchess.
1870	Henry D. Noyes	233 Madison avenue	New York.
1880	D. V. O'Leary	Albany	Albany.
1868	Evander Odell	Unadilla	Otsego.
1876	William Oliver	Penn Yan	Yates.
1866	John Ordronaux	Roslyn	Queens.
1856	John Gay Orton	Binghamton	Broome.
1877	A. R. Otis	Dundee	Yates.
1873	Charles N. Palmer	Lockport	Niagara.
1882	D. Pardee	Fulton	Oswego.
1858	Ed. H. Parker	Poughkeepsie	Dutchess.
1847	Willard Parker	41 East 12th street	New York.
1863	Wm. H. H. Parkhurst	Frankfort	Herkimer.
1878	F. B. Parmele	Greenbush	Rensselaer.
1873	John Parr	Buel	Montgomery.
1866	Israel Parsons	Marcellus	Onondaga.
1874	R. W. Pease	Syracuse	Onondaga.
1881	John C. Peters	83 Madison avenue	New York.
1880	Henry G. Piffard	10 West 35th street	New York.
1880	J. O. Polhemus	Nyack	Rockland.
1877	Abiathar Pollard	Westport	Essex.
1871	Charles G. Pomeroy	Newark	Wayne.
1881	Thomas R. Pooley	107 Madison avenue	New York.
1869	Charles H. Porter	Albany	Albany.
1878	W. W. Porter	Geddes	Onondaga.
1857	Wm. S. Preston	Patchogue	Suffolk.
1879	Jonathan S. Prout	167 Clinton street, Brooklyn	Kings.
1872	P. V. S. Pruyn	Kinderhook	Columbia.
1877	A. E. M. Purdy	288 Madison avenue	New York.
1871	R. C. Reynolds	Pittsford	Monroe.
1858	Tabor B. Reynolds	Saratoga Springs	Saratoga.
1875	C. B. Richards	Binghamton	Broome.
1872	Charles E. Rider	Rochester	Monroe.
1879	William Ring	Buffalo	Erie.
1882	J. O. Roe	Rochester	Monroe.
1870	Thomas F. Rochester	Buffalo	Erie.
1882	Frank W. Rockwell	6 Lafayette avenue, Brooklyn	Kings.
1878	D. B. St. John Roosa	20 East 30th street	New York.
1877	James M. Rose	West Winfield	Herkimer.
1882	John D. Rushmore	129 Montague street, Brooklyn,	Kings.
1868	William Russell	Utica	Oneida.
1854	W. G. Sands	Oxford	Chenango.
1866	Lewis A. Sayre	185 Fifth avenue	New York.
1877	Benjamin A. Segur	281 Henry street, Brooklyn	Kings.
1860	William P. Seymour	Troy	Rensselaer.
1868	John P. Sharer	Little Falls	Herkimer.
1877	A. F. Sheldon	Pultneyville	Wayne.

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Year of Election.	Name.	Post Office.	County.
1871	B. F. Sherman	Ogdensburgh	St. Lawrence
1870	George F. Shrady	247 Lexington avenue	New York.
1873	E. W. Simmons	Canandaigua	Ontario.
1856	Elbridge Simpson	Hudson	Columbia.
1873	J. Marion Sims	267 Madison avenue	New York.
1882	B. F. Smith	Mt. Upton	Chenango.
1875	Eben S. Smith	Penn Yan	Yates.
1878	George C. Smith	Rondout	Ulster.
1857	Stephen Smith	57 West 42d street	New York.
1867	Wm. Manlius Smith	Syracuse	Onondaga.
1875	N. L. Snow	Albany	Albany.
1849	Morgan Snyder	Fort Plain	Montgomery.
1871	S. Fleet Spier	162 Montague street, Brooklyn,	Kings.
1873	H. G. P. Spencer	Watertown	Jefferson.
1874	William B. Sprague	Pavilion	Genesee.
1861	Edward R. Squibb	Brooklyn	Kings.
1872	T. H. Squire	Elmira	Chemung.
1875	J. K. Stanchfield	Elmira	Chemung.
1879	C. L. Stiles	Owego	Tioga.
1880	E. V. Stoddard,	Rochester	Monroe.
1875	Thomas D. Strong	Westfield	Chautauqua.
1882	Frederic R. Sturgis	16 West 32d street	New York.
1882	Samuel G. Swift	Yonkers	Westchester.
1863	John Swinburne	Albany	Albany.
1865	Isaac E. Taylor	7 East 36th street	New York.
1877	William Taylor	Canastota	Madison.
1871	Nathan R. Teft	Onondaga Hill	Onondaga.
1870	J. W. Thompson	Watkins	Schuyler.
1869	M. W. Townsend	Bergen	Genesee.
1880	R. K. Tuthill	Poughkeepsie	Dutchess.
1862	S. M. Van Alstyne	Richmondville	Schoharie.
1860	S. Oakley Vander Poel	36 West 39th street	New York.
1876	Albert Vanderveer	Albany	Albany.
1876	Solomon Van Etten	Port Jervis	Orange.
1873	R. H. Ward	Troy	Rensselaer.
1880	R. F. Weir	37 West 33d street	New York.
1876	Joseph E. West	Utica	Oneida.
1869	William C. Wey	Elmira	Chemung.
1846	John H. Wheeler	Athens	Greene.
1868	Lewis H. White	Fishkill	Dutchess.
1879	William T. White	130 East 30th street	New York.
1869	Darling B. Whitney	East Norwich	Queens.
1869	Henry B. Whiton	Troy	Rensselaer.
1869	Jacob S. Wigton	Spring Valley	Rockland.
1881	P. M. Wise	Willard	Seneca.
1881	C. E. Witbeck	Cohoes	Albany.
1864	Samuel G. Wolcott	Utica	Oneida
1861	Charles S. Wood	171 West 47th street	New York.
1867	C. C. Wyckoff	Buffalo	Erie.

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Year of Election.	Name.	Post Office.	County.
1880	Richard M. Wyckoff	532 Clinton avenue, Brooklyn.	Kings.
1877	F. Wylie	Bath	Steuben.

III. NON-RESIDENT PERMANENT MEMBERS.

[Art. 1, sec. 5, (last paragraph,) of the By-Laws.]

Year Election.	Name.	Residence.
1864	E. M. Alba	St. Augustine, Florida.
1862	Joseph Beattie	Richmond, Va.
1862	H. A. Carrington	New Haven, Conn.
1846	N. S. Davis	Chicago, Ill.
1874	A. T. Douglas	New London, Conn.
1857	Sandford B. Hunt	Newark, N. J.
1860	J. H. Jerome	Saginaw City, Mich.
1864	Charles McMillan	Rome, Italy.
1861	John McNulty	Knoxville, Tenn.
1855	G. C. Monell	Omaha, Nebraska.
1838	John G. Morgan	St. Louis, Missouri.
1857	J. C. Morse	Sabula, Iowa.
1869	James B. Murdoch	Pittsburgh, Penn.
1875	J. H. Pooley	Columbus, Ohio.
1846	Harmon Van Dusen	Mineral Point, Wis.
1872	Arthur S. Wolff	Galveston, Texas.

IV. RETIRED PERMANENT MEMBERS.

The following By-Law was adopted February 3d, 1881, (see Trans. 1881, page 38,): Permanent members of the age of sixty years and upwards, who have been permanent members ten years, on making application to the Secretary, the application being accompanied with the Treasurer's certificate that all dues have been paid up to that date, shall be placed on the list of Retired Permanent Members, and shall thereafter be exempt from the payment of dues, and have the rights and privileges of honorary members. Such retired permanent members may be restored to full permanent-membership, on payment of half the amount of dues that would have accrued during their period of retirement.

Year of Election.	Name.	Residence.	Year of Retirement.
1861	John G. Adams	New York, N. Y.	1881
1865	Edmund S. F. Arnold	Newport, R. I.	1881
1858	Charles G. Bacon	Fulton, N. Y.	1882
1866	A. N. Bell	Garden City, N. Y.	1881
1868	Israel I. Buckbee	Fonda, N. Y.	1882
1866	Thompson Burton	Fultonville, N. Y.	1881
1864	H. S. Chubbuck	Elmira, N. Y.	1881
1854	Thomas F. Cock	New York, N. Y.	1881
1871	Nelson Fanning	Catskill, N. Y.	1882
1851	Frank H. Hamilton	New York, N. Y.	1882
1865	Jacob Hunt	Utica, N. Y.	1881

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Year of Election.	Name.	Residence.	Year of Retirement.
1845	Ferris Jacobs	Delhi, N. Y.	1881
1857	Jonathan Kneeland	South Onondaga, N. Y.	1881
1861	Nelson Nivison	Burdette, N. Y.	1881
1859	Henry N. Porter	New York Mills, N. Y.	1881
1864	Samuel A. Purdy	New York, N. Y.	1881
1845	William D. Purple	Greene, N. Y.	1880
1856	Jacob G. Snell	Amsterdam, N. Y.	1881
1869	William T. Swart	Canandaigua, N. Y.	1881
1864	James S. Whaley	Rome, N. Y.	1881
1851	Joseph White	Canajoharie, N. Y.	1880
1862	Harvey B. Wilbur	Syracuse, N. Y.	1882
1859	Horace K. Willard	East New York, N. Y.	1880
1865	Julien T. Williams	Dunkirk, N. Y.	1880

V. HONORARY MEMBERS.

Year of Election.	Name.	Residence.
1864	J. Adams Allen	Michigan.
1868	Joseph K. Barnes	U. S. Army.
1882	Roberts Bartholow	Philadelphia, Pa.
1880	J. S. Billings	U. S. Army.
1879	Henry I. Bowditch	Boston, Mass.
1868	W. Braithwaite	London, England.
1862	Henry Bronson	New Haven, Conn.
1880	Joseph B. Brown	U. S. Army.
1877	W. A. F. Brown	Dumfries, Scotland.
1867	C. E. Brown-Sequard	London, England.
1881	James C. Bucknill	London, England.
1877	Samuel C. Busey	Washington, D. C.
1855	Horace A. Buttolph	Trenton, N. J.
1871	William H. Byford	Chicago, Ill.
1862	William B. Carpenter	London, England.
1883	Walter Channing	Boston, M ss.
1849	Alonzo Clark	New York.
1868	John M. Cuyler	U. S. Army.
1875	J. M. DaCosta	Philadelphia, Pa.
1866	N. S. Davis	Chicago, Ill.
1875	Francisco Dichiara	Palermo, Italy.
1874	J. Matthews Duncan	Edinburgh, Scotland.
1859	Silas Durkee	Boston, M ass.
1868	Pinckney Webster Ellsworth	Hartford, Conn.
1881	William Farr	London, England.
1861	W. Frazer	Montreal, Canada.
1867	Middleton Goldsmith	Louisville, Ky.
1879	William Warren Green	Portland, Me.
1875	Elisha H. Gregory	St. Louis, Mo.
1856	Samuel D. Gross	Philadelphia, Pa.
1860	Ernest Hart	London, England.
1879	Christopher Heath	London, England.

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Year of Election.	Name.	Residence.
1882	Charles N. Hewitt	Red Wing, Minnesota.
1877	William S. Hopkins	Vergennes, Vt.
1864	Oliver P. Hubbard	Hanover, N. H.
1871	E. K. Hunt	Hartford, Conn.
1875	Ezra M. Hunt	Metuchen, N. J.
1857	Henry Julian Hunter	Sheffield, England.
1870	Ralph Isham	Chicago, Ill.
1862	John Jeffries	Boston, Mass.
1863	Thomas Jennings	Nashville, Tenn.
1861	Pliny A. Jewett	New Haven, Conn.
1878	Joseph Meredith Jones	Washington, D. C.
1868	Thomas S. Kirkbride	Philadelphia, Pa.
1870	H. M. Knight	Lakeville, Conn.
1878	H. C. Lombard	Geneva, Switzerland.
1871	William McCollom	Brooklyn, N. Y.
1873	Rawdon McNamara	Dublin, Ireland.
1879	L. Auguste Mercier	Paris, France.
1877	S. Weir Mitchell	Philadelphia, Pa.
1852	George W. Norris	Philadelphia, Pa
1875	Lewis W. Oakley	Elizabeth, N. J.
1865	Alonzo B. Palmer	Ann Arbor, Mich.
1843	Willard Parker	New York.
1840	Placido Portal	Palermo, Italy.
1852	Samuel S. Purple	New York.
1882	Sidney Ringer	London, England.
1874	Benjamin W. Richardson	London, England.
1857	John Rolph	Toronto, Canada.
1864	William M. Rutherford	Harrisburg, Pa.
1854	Henry L. Sabin	Williamstown, Mass.
1853	Abram Sager	Michigan.
1864	William J. Sloan	U. S. Army.
1866	Albert Smith	Peterboro, N. Y.
1871	Edwin M. Snow	Providence, R. I.
1860	Alfred Stille	Philadelphia, Pa.
1873	Robert Stokes	Dublin, Ireland.
1871	D. Humphreys Storer	Boston, Mass.
1880	W. F. Teevan	London, England.
1866	Samuel W. Thayer	Burlington, Vt.
1870	William Henry Thayer	Brooklyn, N. Y.
1875	J. M. Toner	Washington, D. C.
1869	Theodore R. Varick	Jersey City, N. J.
1872	Rudolph Virchow	Berlin, Germany.
1871	John H. Webb	Galveston, Texas.
1877	Louis de Wecker	Paris, France.
1874	T. Spencer Wells	London, England.
1864	Stephen Wickes	Orange, N. J.
1862	Ashbel Woodward	Franklin, Conn.
1871	Wilmer Worthington	Westchester, Pa.

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PERSONS ELIGIBLE TO MEMBERSHIP.

I. ELIGIBLE TO PERMANENT MEMBERSHIP.

FIRST DISTRICT.

Became Eligible.		County.
1870	Samuel R. Percy	New York.
1862	C. L. Mitchell	Kings.
1862	John P. Garrish	New York.
1863	B. Raphael	New York.
1864	James Kennedy	New York.
1867	Thomas S. Bahan	New York.
1867	Christopher Prince	New York.
1867	Wm. F. Thoms	New York.
1867	Andrew Otterson	Kings.
1897	James Anderson	New York.
1868	Edward H. James	New York.
1869	Isaac H. Barber	Kings.
1870	Wm. C. Otterson	Kings.
1870	John S. Young	Kings.
1861	G. S. Winston	New York.
1872	Gouverneur M. Smith	New York.
1872	Fred. A. Burrall (Academy of Medicine)	New York.
1877	George Bayles	New York.
1877	Frank P. Foster	New York.
1878	H. T. Hanks	New York.
1880	Lucius D. Bulkley	New York.
1881	A. McLane Hamilton	New York.
1881	Laurence Johnson	New York.
1881	Alfred C. Post	New York.
1881	David Webster	New York.
1882	John Byrne	Kings.
1882	C. S. Bull	New York.
1882	Daniel Lewis	New York.
1882	A. V. B. Lockrow	New York.

SECOND DISTRICT.

1862	James Hart Curry	Westchester.
1865	Avery Cook	Orange.
1873	Augustus Huhne	Ulster.
1876	J. G. Porteous	Dutchess.
1877	Thomas S. Dawes	Ulster.
1877	William H. Gedney	Ulster.
1881	John J. Linson	Westchester.
1882	Edwin Barnes	Dutchess.
1882	Alfred Hasbrouck	Dutchess.

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THIRD DISTRICT.

Became Eligible.		County.
1865	John Pindar	Schoharie.
1869	John Calhoun	Delaware.
1869	James S. McLaury	Delaware.
1871	Charles L. Hubbell	Rensselaer.
1871	E. W. Carmichael	Rensselaer.
1872	J. C. Benham	Columbia.
1874	Lemuel Cross	Schoharie.
1874	Israel C. Bourne	Delaware.
1874	George P. Salmon	Columbia.
1876	Amos Fowler	Albany.
1877	J. D. Lomax	Rensselaer.
1878	H. R. Haskins	Albany.
1878	S. S. Cartwright	Delaware.
1878	W. L. Cooper	Rensselaer.
1879	Thomas Beckett	Albany.
1879	H. S. Case	Albany.
1879	John M. Bigelow (Medical College)	Albany.
1879	Stephen G. De La Mater	Schenectady.
1880	Milford L. Bates	Columbia.
1880	G. E. Benson	Columbia.
1882	Samuel B. Ward (Medical College)	Albany.
1882	Charles E. Willard	Greene.
1882	R. D. Traver	Rensselaer.
1882	W. S. Layman	Schoharie.

FOURTH DISTRICT.

1870	D. W. Jones	Franklin.
1872	Louis Samburn	St. Lawrence.
1872	Joseph D. Stuart	Washington.
1875	Sanford E. Hale	Essex.
1877	A. N. Thompson	St. Lawrence.
1878	B. W. Noxon	Saratoga.
1879	E. F. Edgerly	Essex.
1879	Theron Z. Gibbs	Washington.
1879	J. C. Sill	Washington.
1880	A. James Browne	Herkimer.
1881	J. E. Burdick	Fulton.
1881	C. M. Wilson	St. Lawrence.
1882	A. M. Phelps	Franklin.
1882	John Lambert	Washington.
1882	Theodore C. Wallace	Washington.

FIFTH DISTRICT.

1867	Thomas B. Smith	Otsego.
1869	T. J. Green	Oswego.
1870	Horace Lathrop	Otsego.
1872	Walter Kempster	Oneida.
1873	Franklin B. Hough	Lewis.

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Became Eligible.		County.
1873	F. B. A. Lewis	Jefferson.
1873	William H. Nelson	Oneida.
1873	F. W. Root	Madison.
1874	Joseph Gardener	Oswego.
1876	A. H. Crosby	Lewis.
1877	L. H. Hills	Otsego.
1879	Louis A Tourtellot	Oneida.
1880	Edwin Evans	Oneida.
1880	Wm. H. Leonard	Otsego.
1881	H. W. Carpenter	Madison.
1881	I. N. Goff	Madison.
1881	N. W. Bates	Oswego.
1882	James D. Spencer	Jefferson.

SIXTH DISTRICT.

1869	Lyman Congden	Tompkins.
1870	Samuel Ensign	Steuben.
1871	William Bassett	Broome.
1871	F. M. Perine	Livingston.
1873	Thomas J. Wheeler	Cattaraugus.
1873	William B. Alley	Livingston.
1875	D. W. Birge	Schuyler.
1879	Ira F. Hart	Chenango.
1882	L. D. Witherill	Broome.

SEVENTH DISTRICT.

1865	Joseph H. Richardson	Cayuga
1868	A. W. Marsh	Wayne.
1868	E. J. Schoonmaker	Seneca.
1869	D. S. Chamberlain	Wayne.
1873	T. S. Brinkerhoff	Cayuga.
1873	Lucius Stevens	Onondaga.
1876	W. F. Nutten	Wayne.
1878	D. T. Smith	Ontario.
1879	Alfred Mercer, (Medical College)	Onondaga.
1881	Henry B. Allen	Onondaga.
1882	F. R. Bently	Ontario.
1882	John B. Chapin	Seneca.

EIGHTH DISTRICT.

1880	Chas. S. Starr	Monroe.
1882	J. W. Whitbeck	Monroe.
1882	George M. Palmer	Wyoming.

II. ELIGIBLE TO HONORARY MEMBERSHIP.

1855	John H. Ridell	
1855	Christopher Widner	
1857	Bennett Dowler	New Orleans, La.

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Became Eligible.		County.
1863	Ralph Deming	Litchfield, Conn.
1863	H. G. Stevens	St. Albans, Vt.
1868	William Livingston	St. Johns, N. B.
1871	John J. H. Love	Montclair, N. J.
1880	Walter Carpenter	Burlington, Vt.
1880	T. J. Turner	U. S. Navy.
1881	Charles Lockhart Robertson	London, England.
1881	T. S. Clouston	Edinburgh, Scotland.
1882	Theodore G. Wormley	Philadelphia, Pa.
1882	William Goodell	Philadelphia, Pa.

PHYSICIANS.

ON WHOM THE HONORARY DEGREE OF DOCTOR OF MEDICINE HAS BEEN CONFERRED BY THE REGENTS OF THE UNIVERSITY, ON THE RECOMMENDATION OF THE STATE MEDICAL SOCIETY.

[This Society is restricted by statute from nominating more than four persons to the honorary degree of Doctor of Medicine in any one year. And by various resolutions it has been determined that the respective candidates must possess moral and professional standing, must be of the age of thirty-five years or upward, and must receive not less than two-thirds of the votes of the members present. The mode of the nomination shall be as follows:

The Society shall, by open nomination, present the names of any number of physicians, and afterwards the names of the candidates, or such of them as each member shall please to vote for, not to exceed four, shall be voted for in one ballot; and so many as on this ballot shall appear to have received two-thirds of all the votes of the members present, and those only, shall be the persons presented.]

Year.	Name.	County.
1861	Charles G. Bacon	Oswego.
1847	Caleb Bannister	
1857	Milton Barnett	Madison.
1846	George W. Bradford	Cortland.
1864	R. Spencer Chapin	New York.
1855	Alonzo Churchill	Utica, Oneida.
1841	Claudius C. Coan	Seneca.
1834	Robert Collins	Rensselaer.
1876	Samuel M. Crawford	Orange.
1860	Francis J. D'Avignon	Clinton.
1874	Peter Denny	Dutchess.
1834	George Eager	Orange.
1870	Tobias J. Greene	Parish, Oswego.

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Year.	Name.	County.
1852	Abel Huntington	Suffolk.
1865	Ferris Jacobs	Delhi, Delaware.
1832	Lucius Kellogg	Queens.
1852	Erastus King	Otsego.
1855	Jonathan Kneeland	Onondaga.
1859	Richard Lanning	Tompkins.
1870	E. S. Lyman	Sherburne, Chenango.
1845	William Mason	Chenango.
1844	Samuel Maxwell	Fulton.
1841	John Merriman	Columbia.
1853	Elias P. Metcalf	Livingston.
1846	Greene Miller	Ulster.
1844	William W. Miner	New York.
1847	William Newman	New York.
1871	Evander Odell	Unadilla, Otsego.
1832	George W. Phillips	Tompkins.
1848	Eliphalet Platt	Dutchess.
1856	Medina Preston	Sangerfield, Oneida.
1838	Asahel Prior	Madison.
1849	William D. Purple	Chenango.
1848	George C. Schaeffer	New York.
1872	Cornelius H. Schapps	Brooklyn, Kings.
1875	Henry C. Seeley	Orange.
1845	Samuel Shumway	Essex.
1854	Jacob G. Snell	Montgomery.
1827	James Stevenson	Cambridge, Washington.
1859	James M. Sturtevant	Oneida.
1873	Nathan R. Tefft	Onondaga.
1860	Harrison Teller	Kings.
1833	Josiah Trowbridge	Erie.
1867	John Van Ness	Brooklyn, Kings.
1847	John W. Weed	New York.
1857	Hiram Wotkyns	Rensselaer.

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In Memoriam.

I. Deceased Permanent Members.

Year of Election.	Name.	Date of Death.	Age.	Residence.
1863	Hiram Adams.....	March 9, 1865.....	62	Fabius, Onondaga.
1859	Richard L. Allen.....	May 15, 1873.....	65	Saratoga Springs, Saratoga.
1867	William L. Appley.	January 6, 1877.....	...	Cochecton, Sullivan.
1852	James H. Armsby..	December 3, 1875.....	66	Albany, Albany.
1856	E. W. Armstrong...	August 14, 1877.	88	Rochester, Monroe.
1826	Daniel Ayres.....	May 25, 1863.....	66	Amsterdam, Montgomery.
1870	James L. Babcock..	February 13, 1881....	55	Albany, Albany.
1856	Fred. F. Backus....	November 4, 1858...	64	Rochester, Monroe.
1813	Samuel Bard.....	May 24, 1821.....	79	New York.
1850	Enos Barnes.....	July 9, 1862	78	Watkins, Schuyler.
1860	Charles Barrows.....	October 2, 1870.....	...	Clinton, Oneida.
1853	Joseph Bates..... ..	May 28, 1879.....	75	N. Lebanon Sp'gs, Col'bia.
1819	William Bay.....	September 7, 1865....	91	Albany, Albany.
1866	Edward L. Beadle...	April 5, 1882.....	83	Poughkeepsie, Dutchess.
1829	John B. Beck..	April 9, 1851	56	New York.
1817	T. Romeyn Beck....	November 19, 1855..	64	Albany, Albany.
1858	Seneca Beebe.....	November 10, 1881...	65	Marathon, Cortland.
1866	H. K. Bellows.....	March 30, 1880.....	57	Norwich, Chenango.
1838	A. G. Benedict.....	October 4, 1882.....	72	Red Hook, Dutchess.
1868	William B. Bibbins.	January 16, 1871.....	47	New York.
1865	Uriah G. Bigelow...	February 23, 1878....	52	Albany, Albany.
1856	Daniel P. Bissell....	October 29, 1874.....	72	Utica, Oneida.
1854	Arba Blair.....	June 20, 1863.....	82	Rome, Oneida.
1845	Thos. W. Blatchford	January 7. 1866.....	71	Troy, Rensselaer.
1867	Reuben Blawis.....	December, 1872.	..	Fort Miller, Washington.
1863	Douglas Bly.....	May 10, 1876.	52	Rochester, Monroe.
1858	Alfred Bolter.....	July 12, 1880....	69	Ovid, Seneca.
1846	Benjamin E. Bowen	March 12, 1878.....	77	Mexico, Oswego.
1859	James P. Boyd.....	May 10, 1881.....	77	Albany, Albany.
1850	Thos. C. Brinsmade	June 22, 1868	66	Troy, Rensselaer.
1855	Oliver Brisbin.....	July 12, 1871.....	76	Schuylerville, Saratoga.
1823	Thomas Brodhead..	November 11, 1830...	65	Clermont, Columbia.
1862	P. Brooks.....	March 2, 1864.....	39	Binghamton, Broome.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1860	Pelatiah B. Brooks..	February 27, 1874....	86	Binghamton, Broome.
1845	John R. Brown.....	February 28, 1868....	78	Little Falls, Herkimer.
1874	Gurdon Buck.....	March 6, 1877.....	70	New York.
1863	Henry D. Buckley.	January 4, 1872.....	67	New York.
1870	Francis Burdick.....	March 22, 1877.....	59	Johnstown, Fulton.
1853	Phineas H. Burdick	March 28, 1870.....	69	Preble, Cortland.
1843	E. B. Burroughs.....	June 26 1843.....	41	Greene, Chenango.
1857	C. V. W. Burton....	September 23, 1860.	50	Lansingburgh, Rensselaer.
1837	Bryant Burwell.....	September 8, 1861...	65	Buffalo, Erie.
1855	Edson Carr	November 28, 1861...	60	Canandaigua, Ontario.
1866	Wm. F. Carter.....	April 20, 1866..	54	Cohoes, Albany.
1845	Merritt H. Cash.....	April 26,1861.....	59	Ridgebury, Orange.
1827	John H. Cheesman.	October 11, 1862.....	75	New York.
1860	Darius Clark.....	January 23, 1871.....	72	Canton, St. Lawrence.
1862	Jabez Vaughn Cobb	August 28, 1877.....	66	Lockport, Niagara.
1857	Mason F. Cogswell.	January 21, 1864.....	54	Albany, Albany.
1863	George Cook.....	June 12, 1876.....	55	Canandaigua, Ontario.
1850	Hiram Corliss.....	September 7, 1877...	83	Greenwich, Washington.
1855	John Cotes.....	February 26, 1859....	64	Batavia, Genesee.
1860	Levant B. Cotes.....	September 11, 1880..	79	Batavia, Genesee.
1822	Alexander Coventry	December 9, 1831.....	65	Utica, Oneida.
1841	Charles B Coventry	February 23, 1875....	74	Utica, Oneida.
1859	C. Milford Crandall.	October 4, 1867.....	41	Belfast, Allegany.
1868	Henry W. Deane....	January 13, 1878.....	59	Rochester, Monroe.
1860	John Demarest.	October 8, 1872.....	73	Spring Valley, Rockland.
1818	Cornelius E. DePuy.	—— ——, 1822..	30	New York.
1852	Nicoll H. Deering...	December 19, 1867...	73	Utica, Oneida.
1857	James Diefendorf...	January 11, 1868.....	60	Milwaukee, Wisconsin.
1873	D. G. Dodge.....	December 30, 1877...	53	Rouse's Point, Clinton.
1853	A. F. Doolittle.....	May 23, 1872..	61	Herkimer, Herkimer.
1829	H. W. Doolittle.....	December 8, 1853....	65	Herkimer, Herkimer.
1863	Henry S. Downs.....	May 2, 1879.....	57	Brooklyn, Kings.
1858	Benjamin Drake.....	January 11, 1871.....	65	New York.
1821	Charles E. Drake....	—— ——, 1832.....	...	New York.
1868	Hiram N. Eastman..	October 14, 1879.....	69	Owego, Tioga.
1865	Sandford Eastman...	January 8, 1874.....	53	Buffalo, Erie.
1825	Jonathan Eights.....	August 10, 1848.....	75	Albany, Albany.
1815	John Ely..... ...	August 23, 1849.....	75	Coxsackie, Greene.
1836	Sumner Ely.....	February 3, 1857.....	70	Clarksville, Otsego.
1876	William W. Ely.....	March 27, 1879.....	67	Rochester, Monroe.
1861	Franklin Everts.....	February 12, 1864....	36	Oswego, Oswego.
1857	Levi Farr.....	July 18, 1859	72	Greene, Chenango.
1858	Warren Fay.....	February 18, 1875.....	78	Pavilion, Genesee.
1865	John Ferguson.....	October 13, 1874.....	62	Albany, Albany.
1869	M. L. Finch.....	March 6, 1871..... ...	56	Jonesville, Saratoga.
1852	Charles E. Fort.. ...	November 11, 1856...	62	Batavia, Genesee.
1846	James Fountain.....	May 19, 1869.....	80	Jefferson Valley, West'r.
1836	Robert G. Frary.....	December 29, 1862...	69	Hudson, Columbia.
1850	S. H. French.....	May 27, 1877.....	66	Lisle, Broome.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1853	James M. Gardiner.	—— ——, 1858.....	...	Newburgh, Orange,
1878	Charles H. Giberson.	April 19, 1879.....	41	Brooklyn, Kings.
1842	Chandler R. Gilman.	September 26, 1865..	63	New York.
1866	Samuel Gilmore.....	December 6, 1879.....	76	Fleming, Cayuga.
1844	Thomas Goodsell....	January 12, 1864.....	83	Utica, Oneida.
1878	William Gould.....	March 20, 1882..	71	Buffalo, Erie.
1847	Edmund F. Grant...	Lost in the "Arctic." September 27, 1854...	...	Dutchess.
1855	Henry C. Gray	February 10, 1877....	...	N. White Creek, Wash'ton
1857	Abel Green.....	November 7, 1862....	52	Paine's Hollow, Herkimer.
1856	Horace Green.....	November 29, 1866...	63	New York.
1848	Lester Green.....	February 7, 1849.....	52	Little Falls, Herkimer.
1830	Alpheus S. Greene.	February 25, 1851....	64	Watertown, Jefferson.
1860	John H. Griscom...	April 28, 1874.....	65	New York.
1823	Luther Guiteau.....	February 12, 1850....	72	Trenton, Oneida.
1859	Stephen Hagadorn..	August 1, 1863.....	52	Cohocton, Steuben.
1861	C. W. Haight.....	March 5, 1873.....	53	Pleasantville, Westchester.
1830	Moses Hale..... ...	January 3, 1837.....	57	Troy, Rensselaer.
1858	Edward Hall.....	April 28, 1871.....	50	Auburn, Cayuga.
1849	Patrick H. Hard.....	—— ——, 1850.....	59	Oswego, Oswego.
1857	Francis L. Harris...	February 22, 1876....	68	Buffalo, Erie.
1853	Erastus L. Hart.....	October 22, 1871.....	84	Elmira, Chemung.
1857	Samuel Hart.....	September 3, 1878...	82	Brooklyn, Kings.
1859	Moses C. Hasbrouck	October 28, 1870.....	62	Nyack, Rockland.
1845	S. H. Hasbrouck....	December 28, 1881...	87	Jersey City, New Jersey.
1856	Abram Haun.....	March 14, 1878.....	72	Little Falls, Herkimer.
1848	J. Edwin Hawley...	August 1, 1859.....	57	Ithaca, Tompkins.
1847	Truman B. Hicks...	September 16, 1847..	69	Cauldwell, L. Geo., Warren.
1870	William S. Hoffman	January 8, 1882..	66	Port Byron, Cayuga.
1872	M. R. Holbrook.....	June 6, 1881.....	62	Poughkeepsie, Dutchess.
1834	Wm. Horton, Jr.....	—— ——, ...	...	Goshen, Orange.
1816	David Hosack.....	December 22, 1835...	57	New York.
1871	George H. Hubbard	January 19, 1876.....	53	Lansingburgh, Rensselaer.
1820	Amos G. Hull.....	—— ——, ...	...	Oneida.
1824	Laurens Hull.....	June 27, 1865.	86	Angelica, Allegany.
1873	Edward G. Hun	March 14, 1880.....	38	Albany, Albany.
1839	Phineas Hurd.....	September 1, 1867...	81	Scipio, Cayuga.
1850	Daniel T. Jones.....	March 29, 1861.....	60	Baldwinsville, Onondaga.
1870	William Lamont.....	August 16, 1877.....	67	Charlottesville, Schoharie.
1871	J. L. LaMoree..... .	September 23, 1881.	56	Grahamsville, Sullivan.
1868	John V. Lansing ...	May 9, 1880.....	56	Albany, Albany.
1854	Charles A. Lee.....	February 14, 1872....	71	Peekskill, Westchester.
1861	James Lee.....	April 13, 1856.....	47	Mechanicsville, Saratoga.
1831	Edward G. Ludlow.	July 7, 1877.....	84	Yonkers, Westchester.
1822	James R. Manly.....	November 21, 1851...	69	New York.
1847	Alden March.....	June 17, 1869.....	73	Albany, Albany.
1860	M. M. Marsh.....	June 9, 1868	56	Ripley, Ohio.
1862	Theo. L. Mason.....	February 12, 1882....	78	Brooklyn, Kings.
1844	Henry Maxwell.....	July 21, 1856.....	...	——, Niagara.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1838	John McCall..... ...	October 6, 1867.....	80	Utica, Oneida.
1840	John McClellan.....	October 18, 1855.....	83	Hudson, Columbia.
1835	Samuel McClellan...	April 8, 1855.....	68	Schodack, Rensselaer.
1831	James McNaughton.	June 11, 1874.....	78	Albany, Albany.
1856	Peter McNaughton..	December 19, 1875...	75	Albany, Albany.
1871	Hiram McNutt	May 3, 1876.....	55	Warrensburgh, Warren.
1850	Nathaniel Miller....	May 7, 1863.....	79	Bellport, Suffolk.
1865	James M. Minor.....	March 23, 1879.....	64	New York.
1825	Henry Mitchell.	January 12, 1856.....	72	Norwich, Chenango.
1817	Samuel L. Mitchell.	September 7, 1831....	67	New York.
1874	E. C. Moe.....	April 17, 1876.....	...	Ithaca, Tompkins.
1860	Benjamin J. Mooers.	May 20, 1869.....	82	Plattsburgh, Clinton.
1867	Levi Moore.....	June 30, 1880.....	...	Albany, Albany.
1833	John Geo. Morgan..	October 4, 1878.....	80	St. Louis, Missouri.
1864	Peter Moulton.....	December 7, 1873.....	79	New Rochelle, Westchester.
1872	Charles C. Murphy..	August 8, 1874.....	50	East Bloomfield, Ontario.
1861	Joseph N. Northrop.	September 17, 1878..	61	Albany, Albany.
1848	William S. Norton...	February 20, 1873....	67	Ft. Edward, Washington.
1850	Helon F. Noyes.....	January 13, 1872.....	70	Stillwater, Minn.
1857	Andrew F. Oliver....	June 11, 1857.....	65	Penn Yan, Yates.
1820	Felix Pascalis.....	July 27, 1833.....	71	New York.
1839	Eli Pearce.....	March, 1874.....	...	Coesse, Indiana.
1862	E. R. Peaslee.....	January 21, 1878.....	64	New York.
1828	Richard Pennel.....	April 11, 1761.....	62	New York.
1855	James L. Phelps....	October 17, 1869.. ...	84	New York.
1859	Uriah Potter.....	December 16, 1869...	60	Fort Plain, Montgomery.
1849	John M. Pruyn.....	February, 1866.....	60	Kinderhook, Columbia.
1862	A. G. Purdy.....	April 5, 1874.....	66	Oneida, Madison.
1856	Jotham Purdy.....	August 11, 1858.....	59	Elmira, Chemung.
1859	John Putnam.....	January 22, 1879.....	78	Madison, Madison.
1861	J. V. P. Quackenbush	June 8, 1876.....	57	Albany, Albany.
1863	Josiah Rathbun.. ...	March 10, 1879.....	84	Utica, Oneida.
1854	Henry Reynolds.....	December 30, 1857...	68	Wilton, Saratoga.
1864	J. H. Reynolds.....	April 3, 1870.....	42	Wilton, Saratoga.
1844	John R. Rhinelander	May 8, 1857.....	65	New York.
1874	William H. Rice.....	January 21, 1881.....	60	Phœnix, Oswego.
1877	Chas. A. Robertson.	April 1, 1880.....	51	Albany, Albany.
1854	Wm. Rockwell.	December 30, 1868...	68	New York.
1818	Nicholas Romayne..	July 20, 1817.....	61	New York.
1864	John Root.....	November 25, 1876...	52	Batavia, Genesee.
1852	Royal Ross.....	May 9, 1856.....	58	New Berlin, Chenango.
1867	Henry B. Salmon ..	January 12, 1879.....	65	Stuyvesant Falls, Col'bia
1855	A. L. Saunders.....	March 24, 1882.....	67	Brookfield, Madison.
1854	Azariah B. Shipman	September 15, 1868..	65	Syracuse, Onondaga.
1859	Seth Shove.....	February 24, 1878....	73	Katonah, Westchester.
1852	Samuel Shumway...	August 8, 1874.....	81	Whitehall, Washington.
1837	Calvin W. Smith....	August 21, 1839.....	61	Little Falls, Herkimer.
1854	John R. Smith.....	September 28, 1864.,	62	Alexander, Genesee.
1873	T. Blanch Smith....	April 14, 1875.....	40	Nyack, Rockland.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1846	Simeon Snow.....	September 20, 1865...	62	Root, Montgomery.
1819	Lyman Spalding....	October 31, 1821.....	46	New York.
1835	Thomas Spencer....	May 30, 1857.....	65	Geneva, Ontario,
1847	Alden S. Sprague....	January 8, 1863.....	62	Buffalo, Erie.
1850	Barent P Staats....	July 9, 1871.....	74	Albany, Albany.
1865	Peter P. Staats.....	October 20, 1874.....	71	Albany, Albany.
1852	Jehiel Stearns.....	October 8, 1878.....	89	Pompey, Onondaga.
1814	John Stearns.....	March 17, 1848.....	78	New York.
1824	John H. Steel.....	—— ——, 1838.....	58	——, Saratoga.
1855	Ebenezer Steel.....	December, 1856.....	62	Delhi, Delaware.
1848	Alex. H. Stevens....	March 30, 1869.....	79	New York.
1855	Philander Stewart...	February 11, 1874...	54	Peekskill, Westchester,
1858	James M. Sturtevant	August 10, 1878.....	73	Rome, Oneida.
1865	Gifford Sweet.....	April 22, 1879.....	66	Fairfield, Herkimer.
1877	George Swinburn...	September 17, 1881..	71	Rochester, Monroe.
1834	William Taylor.	September 16, 1865..	74	Manlius, Onondaga.
1842	Lake I. Tefft.....	May 10, 1880.....	83	Syracuse, Onondaga.
1851	Dan'l. G. Thomas...	March 27, 1880.....	73	Utica, Oneida.
1845	Alex. Thompson....	September 21, 1869..	60	Aurora, Cayuga.
1854	James Thorn.....	November 27, 1876..	74	Troy, Rensselaer.
1858	William Tibbits.....	—— ——, 1874.....	...	Mechanicsville, Saratoga.
1851	John E. Todd.....	April 22, 1868.....	62	Baldwinsville, Onondaga.
1855	Freeman Tourtelot..	December 14, 1868...	62	Middlegrove, Saratoga.
1815	Chas. D. Townsend.	December 19, 1847...	69	Albany, Albany.
1856	Howard Townsend..	January 15, 1867.....	43	Albany, Albany.
1860	Wm. P. Townsend..	December 25, 1876...	58	Goshen, Orange.
1859	John F. Trowbridge	February 19, 1872....	80	Syracuse, Onondaga.
1854	L. S. Turner.....	—— ——, 1860.....	49	Fallsburgh, Sullivan.
1859	Frank Tuthill.....	August 27, 1865.....	...	San Francisco, Cal.
1867	Alfred Underhill.....	December 7, 1873....	65	New York.
1862	Chas. E. Van Anden.	October 19, 1873.....	54	Auburn, Cayuga.
1848	Peter Van Buren....	December 5, 1873....	71	New York.
1853	A. Van Dyck.....	August 31, 1871.....	71	Oswego, Oswego.
1846	H. Van Hoevenburgh	July 27, 1868.....	77	Kingston, Ulster.
1869	John R. Van Kleek...	January 2, 1876.	67	New York.
1841	Peter Van O'Linda...	August 6, 1872.....	74	Albany, Albany.
1848	Richard A. Varick...	August 10, 1871.....	64	Poughkeepsie, Dutchess.
1861	A. E. Varney.....	February 24, 1870....	68	Middleville, Herkimer.
1874	Alexander M. Vedder	December 29, 1878...	68	Schenectady, Schenectady.
1874	Edward S. Walker...	July 17, 1876.....	54	Ilion, Herkimer.
1862	John D. Watkins....	June 5, 1878.....		Liberty, Sullivan.
1826	John Watts, Jr.....	February 4, 1831.....	45	New York
1821	Peter Wendell.....	October 31, 1849.....	63	Albany, Albany.
1851	Silas West.....	August 27, 1859.....	67	Binghamton, Broome.
1868	John F. Whitbeck...	December 8, 1880.....	68	Rochester, Monroe.
1861	Austin White.....	September 1, 1876....	...	Mexico, Oswego.
1851	Barlow White.....	December 11, 1862...	87	Fishkill, Dutchess.
1867	Devillo White.....	May 10, 1882.....	81	Sherburne, Chenango.
1854	James Platt White...	September 28, 1881...	71	Buffalo, Erie.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1818	Joseph White.....	June 2, 1832	70	Cherry Valley, Otsego.
1865	Oliver White.....	November 7, 1879....	69	New York.
1833	Samuel White.....	February 10, 1845....	68	Hudson, Columbia.
1860	C. H. Wilcox.....	November 7, 1862....	49	Buffalo, Erie.
1861	James W. Wilkie....	March 13, 1876.....	51	Auburn, Cayuga.
1845	Augustus Willard....	March 12, 1868.....	69	Greene, Chenango.
1858	Sylvester D. Willard.	April 2, 1865.....	39	Albany, Albany.
1828	Platt Williams.....	December 8, 1870....	...	Albany, Albany.
1816	Westel Willoughby.	October 3, 1844.....	75	Newport, Herkimer.
1814	William Wilson.....	—— ——, 1829.....	..	Clermont, Columbia.
1856	D. C. Winfield.....	May 23, 1878.....	61	Middletown, Orange.
1832	Joel A. Wing.....	September 6, 1852....	64	Albany, Albany.
1845	Charles Winnie.....	May 9, 1877.....	65	Buffalo, Erie.
1847	Nelson Winton.....	August 27, 1864.....	64	Havana, Schuyler.
1855	Jas. Rushmore Wood	May 4, 1882.....	66	New York.
1825	Alfred Wotkyns.....	December 23, 1866...	78	Troy, Rensselaer.

II. DECEASED HONORARY MEMBERS.

1874	Washington L. Atlee.	September 7, 1878...	70	Philadelphia, Pa.
1854	John P. Batchelder.	April 7, 1868.....	82	New York.
1845	Lewis C. Beck.....	April 20, 1853.....	55	New Jersey.
1865	Josiah G. Beckwith.	March 21, 1871.....	68	Litchfield, Conn.
1837	Luther V. Bell.....	February 11, 1862....	55	Massachusetts.
1868	N. D. Benedict.....	April, 1871.....	...	St. Augustine, Fla.
1839	Jacob Bigelow.....	January 10, 1879.....	91	Boston, Mass.
1874	C. William Boeck....	December, 1875.....	67	Christiana, Norway.
1844	Amariah Brigham...	September 9, 1849...	51	New York.
1863	Samuel W. Butler...	January 6, 1874.....	50	Philadelphia.
1870	Joseph Carson.....	December 30, 1876...	68	Philadelphia, Pa.
1860	Benj. Hopkins Catlin	....	...	Meriden, Conn.
1823	Nathaniel Chapman.	July 1, 1853	73	Philadelphia, Pa.
1847	Henry H. Childs....	March 22, 1868	84	Pittsfield, Mass.
1878	Clarkson T. Collins.	April 10, 1881.....	60	Great Barrington, Mass.
1864	James Couper.....	August, 1865.....	...	Newcastle, Del.
1861	Dixi Crosby.....	September 26, 1873..	74	Hanover, N. H.
1834	Jas. Conquest Cross.	....	...	Kentucky.
1859	John De La Mater...	March 28, 1876.....	...	Cleveland, Ohio.
1858	Sam'l Henry Dickson	March 31, 1872.....	74	Charlestown, S. C.
1879	Greensville Dowell..	June 9, 1881.....	55	Galveston, Texas.
1824	Daniel Drake.....	November 6, 1852....	67	Cincinnati, Ohio.
1841	Benj. W. Dudley....	January 20, 1870.....	80	Lexington, Kentucky.
1836	Robley Dunglison...	April 1, 1869.....	71	Philadelphia, Pa.
1835	John Eberle	February 2, 1838.....	50	Ohio.
1853	John W. Francis....	February 8, 1861.....	72	New York.
1825	Jos. Adams Gallup .	October, 1849.....	80	Burlington, Vt.
1862	T. G. Geoghegan...	December, 1869.....	...	Dublin, Ireland.
1830	John W. Gloninger.	March 10, 1874.....	75	Lebanon, Pa.
1817	James Hadley.....	October 17, 1869.....	84	Buffalo, N. Y.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1843	Enoch Hale.....	—— ——, 1848.....	...	Boston, Mass.
1855	Marshall Hall...	August 11, 1857.....	67	London, England.
1828	Wm. Hammersley...	—— ——, 1833.....	...	New York.
1847	Seth Hastings.....	....	...	Oneida County, N. Y.
1842	Isaac Hays.....	April 12, 1879	88	Philadelphia, Pa.
1824	John D. Henry.....	November 13, 1842...	60	Rochester, N. Y.
1832	Thomas W. Henry..	....	...	Brooklyn, N. Y.
1841	Hugh L. Hodge.....	February 26, 1873....	77	Pennsylvania.
1856	Charles Hooker.....	March 19, 1863	64	New Haven, Conn.
1811	David Hosack.....	December 22, 1835..	66	New York.
1830	Eli Ives.....	October 8, 1861.....	83	New Haven, Conn.
1835	Samuel Jackson.....	April 5, 1872.....	85	Philadelphia, Pa.
1832	Thomas C. James...	July 25, 1835.....	69	Philadelphia, Pa.
1865	Wilson Jewell.....	November 4, 1867....	67	Philadelphia, Pa.
1839	Jonathan Knight....	August 25, 1864.....	75	New Haven, Conn.
1828	John Lizars.	....	...	Edinburgh, Scotland.
1827	Jos. Lovell, U. S. A.	October 17, 1836.....	...	Washington, D. C.
1834	Alfred T. Magill.....	....	...	Winchester, Pa.
1848	Frederick May..... .	January 23, 18—.....	74	Washington, D. C.
1831	George McClellan...	May 8, 1847.....	51	Philadelphia, Pa.
1837	Charles D. Meigs....	June 22, 1869.....	77	Pennsylvania.
1860	George Mendenhall.	June 4, 1874.....	...	Cincinnati, O.
1808	John Miller.....	March 30, 1862.....	87	Truxton, N. Y.
1811	Samuel L. Mitchell..	September 7, 1831...	67	New York.
1851	Stephen Mosher	....	...	Cincinnati, O.
1820	Valentine Mott.....	April 26, 1865.....	79	New York.
1817	John Murray, Esq...	....	...	Edinburgh, Scotland.
1833	Reuben D. Mussey..	June 31, 1866.....	86	Ohio.
1872	M. Nelaton.....	September 21, 1873...	66	Paris, France.
1823	Josiah Noyes.....	————, 1853.....	77	Hamilton College, Clinton. [N. Y.
1838	Daniel Oliver..... ..	————, 1842.....	56	New Hampshire.
1827	John Onderdonk....	—— ——, 1832.....	...	New York.
1839	Joseph Parrish.....	March 18, 18—.... ...	60	Philadelphia, Pa.
1858	Marshall S. Perry...	—— ——, 1859.....	..	Boston, Mass.
1844	John S. Peters.....	—— ——, 1858.....	...	Connecticut.
1825	Philip S. Physick....	December 15, 1837...	70	Philadelphia, Pa.
1861	Zina Pitcher.....	April 5, 1872.....	75	Detroit, Mich.
1808	John Pomeroy.....	—— ——, 1844.....	75	Burlington, Vt.
1865	Charles A. Pope	July 5, 1870.....	...	St. Louis, Mo.
1819	Wright Post.....	June 14, 1828.....	61	New York.
1810	Alexander Proudfit..	—— ——, 1844.....	75	Salem, N. Y.
1868	Isaac Ray.....	March 31, 1881.....	74	Philadelphia, Pa.
1845	Landon C. Rives.....	June 3, 1870.....	79	Cincinnati, O.
1812	Nicholas Romayne...	July 20, 1817.....	61	New York.
1808	Benjamin Rush.....	April 13, 1813.....	68	Philadelphia, Pa.
1836	Thomas Sewall.....	September 10, 1845..	59	Washington, D. C.
1819	George C. Shattuck.	March 18, 1854.....	70	Boston, Mass.
1869	Sir Jas. Y. Simpson.	May 8, 1870.....	59	Scotland.
1829	J. Augustine Smith.	February 9, 1865.....	83	Virginia.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1842	Jerome V. C. Smith.	—— ——, 1879.....	..	New York.
1863	Lyndon A. Smith....	December 15, 1865...	70	Newark, N. J.
1808	Nathan Smith.....	January 26, 1829.....	67	New Haven, Conn.
1819	Lyman Spalding.....	October 31, 1821.....	46	New York.
1812	John Stearns.....	March 17, 1848.....	78	New York.
1846	Alex'der H. Stevens.	March 30, 1869.....	79	New York.
1846	Mat. Stevenson.....	....	...	Newburgh, N. Y.
1860	Warren Stone.....	....	...	New Orleans, La.
1848	Woolbridge Strong..	March 29, 1861.....	67	Boston, Mass.
1831	Eli Todd.....	November 7, 1833....	64	Connecticut.
1865	Charles S. Tripler...	October 20, 1866	...	U. S. Army.
1838	William Tully.....	March, 1859.....	74	Springfield, Mass.
1810	John Warren.....	April 4, 1815.....	62	Boston, Mass.
1819	John C. Warren.....	May 4, 1856.....	78	Boston, Mass.
1860	J. Mason Warren....	August 19, 1867.....	56	Boston, Mass.
1870	Henry S. West.....	April 1, 1876.....	49	Sivas, Asia Minor.
1808	Moses Willard.....	December 6, 1826....	66	Albany, N. Y.
1829	Samuel White.....	—— ——, 1845.....	68	Hudson, N. Y.
1840	George B. Wood.....	March 30, 1879.....	82	Philadelphia, Pa.

III. DECEASED HONORARY DOCTORS OF MEDICINE.

1856	Hiram Adams.....	March 9, 1865..... ...	62	Fabius, Onondaga.
1858	William L. Appley.	January 6, 1877.....	...	Cochecton, Sullivan.
1829	Daniel Ayres.....	March 25, 1853,.....	66	Amsterdam, Montgomery.
1830	Enos Barnes.....	July 9, 1862.....	78	Watkins, Schuyler.
1861	Charles Barrows....	October 2, 1870.....	...	Clinton, Oneida.
1844	Matthias B. Bellows	....	...	———, ———.
1857	Daniel P. Bissell....	October 29, 1874.....	72	Utica, Oneida.
1849	Arba Blair.....	June 20, 1863.....	82	Rome, Oneida.
1848	Benjamin E. Bowen.	March 12, 1878.. ...	77	Mexico, Oswego.
1852	Abel Brace.....	October 24, 1863.....	70	Catskill, Greene.
1854	Sardius Brewster....	....	...	Austinboro, Ohio.
1841	Richard S. Brian...	....	...	———, Rensselaer.
1828	Thomas Brodhead...	November 11, 1830...	65	Clermont, Columbia.
1847	Pelatiah B. Brooks.	February 27, 1874....	86	Binghamton, Broome.
1851	Phineas H. Burdick	March 28, 1870.....	69	Preble, Cortland.
1855	Edson Carr	November 28, 1861...	60	Canandaigua, Ontario.
1859	Merritt H. Cash.....	April 26, 1861.	59	Ridgeway, Orange.
1851	Purcell Cooke.....	December 24, 1860...	...	———, Kings.
1832	Fayette Cooper	....	...	New York.
1846	Ithamar B. Crawe...	June 2, 1847..	54	Watertown, Jefferson.
1832	Thos. O'H. Croswel	January, 1844.....	76	Catskill, Greene.
1842	Wm. C. Dewitt.....	December 26, 1871...	75	———, Ulster.
1834	Harvey W. Doolittle	December 8, 1853....	64	Herkimer, Herkimer.
1831	Thomas Dunlop.....	—— ——, 1860.....	82	Schenectady, Schenectady.
1827	Jonathan Eights....	August 10, 1848.....	75	Albany, Albany.
1831	John Ely.....	August 23, 1849.....	75	Coxsackie, Greene.

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Year of Election.	Name.	Date of Death.	Age.	Residence.
1842	Levi Farr.....	July 18, 1859.....	72	Greene, Chenango.
1834	Asa Fitch.....	August 24, 1843.....	77	Salem, Washington.
1827	Thomas Fuller.....	....	...	———, Otsego.
1858	Nelson A. Garrison.	January 26, 1872.....	73	———, Kings.
1828	Eleazer Gedney.....	———, 1832.....	...	———, Orange.
1842	Thomas Goodsell....	January 12, 1864.....	83	Utica, Oneida.
1832	Alpheus S. Greene.	February 25, 1851....	64	Watertown, Jefferson.
1850	Patrick H. Hard. ..	———, 1850.....	...	Oswego, Oswego.
1828	John D. Henry.....	....	...	———, Monroe. [Warren.
1846	Truman B. Hicks....	September 16, 1847..	69	Cauldwell, Lake George,
1854	John W. Hinckley...	—— ——, 1860.....	56	Albany, Albany.
1858	James Hogaboom....	....	...	———, Rensselaer.
1827	Laurens Hull.....	June 27, 1865.....	86	Angelica, Allegany.
1829	Joseph G. T. Hunt.	August, 1830.....	47	———, Kings.
1842	Lester Jewett.....	December, 1863.....	70	———, Seneca.
1830	Consider King.....	August 19, 1848.....	74	Wisconsin.
1833	Joshua Lee	....	..	———, Yates.
1831	John McClellan.....	October 18, 1855.....	83	Hudson, Columbia.
1850	Nathaniel Miller.....	May 7, 1863.....	79	———, Suffolk.
1833	Benjamin J. Mooers.	May 20, 1869.....	82	Plattsburgh, Clinton.
1841	Henry B. Moore.....	December 23, 1868...	78	Coldwater, Michigan.
1860	Peter Moulton.....	December 7, 1873.....	79	New Rochelle, Westchester.
1851	Heman Norton.....	—— ——, 1855.....	75	———, Oneida.
1857	William S. Norton...	February 20, 1863...	66	Fort Edward, Washington.
1845	Andrew F. Oliver....	June 11, 1857.....	65	Penn Yan, Yates.
1827	John Onderdonk.....	—— ——, 1832.....	...	New York.
1855	James L. Phelps.....	October 17, 1869.....	84	New York.
1831	Samuel Porter.....	June 14, 1843.....	65	Skaneateles, Onondaga.
1868	Lewis Post.....	February 12, 1879....	69	Lodi, Seneca.
1849	Lewis Riggs.....	November 7, 1870....	88	Homer, Cortland.
1827	Gain Robinson.....	....	...	———, Wayne.
1858	William Rockwell...	December 30, 1868 ..	68	New York.
1865	Richard S. Satterlee	October 10, 1880.....	82	New York.
1829	Henry H. Sherwood	....	..	———, Jefferson.
1852	Mason G. Smith.....	April 10, 1857.....	....	———, Wyoming.
1830	Matson Smith.....	.....	...	———, Westchester.
1859	Peter P. Staats.....	October 20, 1874.....	74	Albany, Albany.
1829	John H. Steel.....	—— ——, 1838.....	58	———, Saratoga.
1856	Samuel J. Swalm....	August 27, 1872.....	63	———, Kings.
1850	James Thorn.....	November 27, 1876...	74	Troy, Rensselaer.
1850	John E. Todd..... ...	April 22, 1868.....	62	Baldwinsville, Onondaga.
1830	Charles D. Townsend	December 19, 1847...	69	Albany, Albany.
1833	Josiah Trowbridge	September 17, 1862..	77	———, Erie.
1844	Peter Van O'Linda...	August 6, 1872.....	74	Albany, Albany.
1864	Leonard G. Warren.	—— ——, 1866.....	63	Albany, Albany.
1848	Joshua Webster.....	May 2, 1849.....	78	Fort Plain, Montgomery.
1856	Silas West.....	August 27, 1859.....	67	Binghamton, Broome.
1845	Bartow White.....	December 11, 1862..	87	Fishkill, Dutchess.

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County Medical Societies.

ALBANY COUNTY.

Medical Society of the County of Albany.

(Organized in 1806.)

Meetings—Annual, second Tuesday in October; semi-annual, second Tuesday in May. Stated meetings are held in the evening, at least once each month, from October to May.

Officers. (*October* 11, 1881.)

J. S. Mosher, President.
J. U. Haynes, Vice-President.
T. Featherstonhaugh, Secretary.
M. J. Lewi, Treasurer.

Censors.

S. B. Ward, Henry March, D. C. Case, W. N. Hays, A. T. Van Vranken.

Delegates to State Medical Society.

J. D. Featherstonhaugh, T. Helme, J. W. Moore, E. Van Slyke.

Committee on Hygiene, and the Relations of the Profession to the Public.

J. S. Mosher, Chairman,
J. U. Haynes,
P. B. Collier,
D. V. O'Leary,
F. C. Curtis,
F. J. Merrington.
W. G. Tucker,
D. H. Cook,

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Members.

Archambault, J. L. 56 Congress street, Cohoes.
Bailey, James S., 95 Hamilton street.*
Bailey, Theodore P., 43 Central avenue.
Bailey Wm. H., 1 Washington avenue.
Balch, Lewis, 61 Eagle street.
Ball O. D., 766 Broadway.
Barker, James F., 675 Broadway.
Bartlett, E. A., 83 Hawk street.
Becker, Hiram, New Salem.
Beckett, Thomas, 276 Washington ave.
Bell, H. W., 350 Broadway, East Albany.
Bendell, Herman, 109 Eagle street.
Bigelow, J. M., 81½ Hudson avenue.
Blatner, J. H., 132 Hudson avenue.
Boudrias, L., 105 Mohawk st., Cohoes.
Boulware, J. R., 171 Hamilton street.
Boyd, James P., 212 State street.
Brown, E. E., Bethlehem Centre.
Buffinton, C. E., 229 Broadway, W. Troy.
Case, Daniel C., Slingerlands.
Case, H. S., 80 Madison avenue.
Clarke, O. H. E., 139 Mohawk st., Cohoes.
Clark, R. D., 65 Grand street.
Classen, F. L., 66 Grand street.
Cook, D. H., 272 Clinton avenue.
Craig, Wm. H., 12 Ten Broeck street.
Crounse, Hiram, Clarksville.
Crounse, Jesse, Knowersville.
Curtis, F. C., 17 Washington avenue.
Davidson, J. R., South Bethlehem.
De Graff, A., Guilderland.
Devol, C., 48 Franklin street.
Du Bois, Mary, 192 Hamilton street.
Elmendorf, G. E., Coeymans Hollow.
Featherstonhaugh, J. D., 3 Summit st., Cohoes.
Featherstonhaugh, Thomas, New York, N. Y.
Fegan, Daniel, 319 Central avenue.
Fennelly, P. E., 79 Broadway, W. Troy.
Fonda, David E., 65 Elm street.
Fowler, Amos, 29 Second street.
Fredenburgh, B. B., Coeymans.
Freeman, S. H., 77 Columbia street.
Geoghan, Wm., 125 Grand street.
Gould, John Woodworth, (Cherry Hill,) South Pearl street.
Graveline, L. C. B., 119 Green street.
Greene, Clark W., 754 Broadway.
Hailes, Wm. Jr., 197 Hamilton street.
Hale, Lorenzo, 194 Clinton avenue.
Hall, John E., Green Island.
Haskell, H. M., Second street, Bath-on-the Hudson, Albany.
Haskins, H. R., 708 Broadway.
Haynes, J. U., 76 Remsen st., Cohoes.
Hays, Wm. N., 650 Central avenue.
Healey, James C., 46 Rensselaer street.
Helme, Thomas, McKownville.
Hoit, Lehman B., 76 Hudson avenue.
Huested, Alfred B., 77 Eagle street.
Hun, Thomas, 31 Elk street.
Hyland, Thomas G., 237 Madison avenue.
Keegan, P. J., 139 North Pearl street.
Kilbourne, Albert W., 792 Broadway.
La Moure, Uriah B., 113 Hamilton street.
Lewi, Joseph, 94 Westerlo street.
Lewi, Maurice J., 94 Westerlo street.
March, Henry. 228 State street.
McAllister, John J. D., 98 Arch street.
McNaughton, Henry G., 89 Hawk street.
Mereness, H. E., 712 Broadway.
Merrill, C S., 23 Washington avenue.
Merrington, Frank J., 3 Lancaster street.
Miller, Howard, 331 Madison avenue.
Monro, Nelson, Swan cor. George street, Green Island.
Moore, J. W., 92 Mohawk street, Cohoes.
Morgan, William, 30 Perry street.
Morrow, Samuel R., 59 Hawk street.
Mosher, C. D., 351 South Pearl street.
Mosher, Frank G., Coeymans.
Mosher, J. S., 3 Lancaster street.
Munson, George S., 138 State and 47 Eagle streets.
Murphy, P. M., 442 Broadway.
Murray, Wm. H., 269 Lark street.
Myers, John J., 920 Broadway.
Nellis, T. W., 81 Hudson avenue.
Nellis, W. J., 81 Hudson avenue.
Newcomb, G. H., 94 Chestnut street.
O'Leary, D. V., 69 South Ferry street.
Paine, Howard S., 105 State street.
Papen, G. W., 89 Schuyler street.
Peck, M. R. C., Albany.

*When the town is not named, Albany is to be understood.

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Peltier, G. Upton, White st. cor. Remsen, Cohoes.
Perry, T. Kirk, 180 Second street.
Phillips, Carroll H., Watervliet Centre.
Porter, Charles H., 55 Eagle street.
Purple, W. L., 46 Second street.
Reynolds, W. H. T., 24 Hawk street.
Ritzmann, Otto, 200 Lark street.
Rossman, J. B., 999 Madison avenue.
Rouchel, Laurentine, 81 Ten Broeck st.
Sabin R. H., 245 Broadway, West Troy.
Sabin, William B., West Troy.
Scattergood, C. F., 10 Bleecker place.
Segar, C. E., Adams Station.
Shanks, Seth G., 547 Clinton avenue.
Shiland, A., 251 Broadway, West Troy.
Shiland, J. C., 251 Broadway, W. Troy.
Smith, Charles H., 246 Washington ave.
Snow, N. L., 170 State street.
Staats, Charles P., 201 Madison ave.
Starkweather, H. R., 200 Central ave.
Steenberg, B. U., 1 Chapel street.
Steenburg, H. W., 24 George st., Green Island.
Stonehouse, John Ben., 5 High street.
Swinburne, John, office, 57 Eagle street.
Tefft, Edwin B., 289 Clinton avenue.
Ten Eyck, Anthony P., De Freestville, Rensselaer county.
Thompson, 5 Canal street.
Townsend, Franklin, Jr., 188 State st.
Trego, T. Markley, 38 Clinton avenue.
Tucker, Willis G., 4 Lancaster street.
Ullman, G. L., 81 Central avenue.
Ullman, S. E., 145 Central avenue.
Vander Poel, S. O., Jr., 294 State street.
Vanderveer, Albert, 28 Eagle street.
Van Slyke, E., 320 South Pearl street.
Van Vranken, A. T., 31 Union street, West Troy.
Wade, E. M., Watervliet Centre.
Ward, S. B., 135 North Pearl street.
Weidman, Felix, Westerlo.
Winne, L. B., 62 Livingston avenue.
Witbeck, C. E., 20 Seneca street, Cohoes.
Woodward, Harriet A., 695 Broadway.
Worden, T. D., 91 Hawk street.

Number of Members, 132.

ALLEGANY COUNTY.

ALLEGANY COUNTY MEDICAL SOCIETY.

(Date of Organization unknown.)

MEETINGS—Annual, third Wednesday in June; quarterly, third Wednesday in September, December and March.

Officers. (*June* 21, 1882.)

Otis Allen, President.
G. C. McNett, Vice-President.
A. E. Willard, Secretary and Treasurer,

Censors.

A. E. Willard, Stephen Maxson, C. W. Saunders, H. H. Nye, O. T. Stacy.

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Delegate to State Medical Society.

J. H. Saunders.

Committee on Hygiene.

Seneca Allen, G. C. McNett, Mark Sheppard.

Members.

Allen, Otis, Cuba.
Allen, Seneca, Cuba.
Anderson, C. G., Belmont.
Babcock, B., Friendship.
Baker, Thaddeus, Andover.
Barney, Anthony, Independence.
Bennett, I. E., Granger.
Bixby, J. P., Rushford.
Charles, R. Y., Rushford.
Cottrell, W. S., Whitesville.
Crandall, W. W., Andover.
Cutler, Dorr, Bolivar.
Cutler, J. L., Bolivar.
Demmings, C. C., Friendship.
Gillett, G. M., Cuba.
Green, S. W., Wellsville.
Harding, John, Hume.
Hopper, Charles A., Friendship.
Laughlin, E. J., Andover.
Lyman, H. H., Hume.
McNett, G. C., Belmont.
Maxson, Stephen, Cuba.
Moors, J. A., Richburgh.
Norton, Benjamin, Belmont.
Nye, H. H., Wellsville.
Pearsons, A. E., Scio.
Place, H. A., Ceres.
Read, Randall, Wellsville.
Saunders, Charles W., Belfast.
Saunders, H. P., Alfred Centre.
Saunders, J. H., Belfast.
Sheppard, Mark, Alfred.
Smith, A. W., Short Track.
Smith, C. F., West Almond.
Smith, F. N., Belmont.
Smith, William M., Angelica.
Stacy, O. T., Rushford.
Stebbins, Roderick, Friendship.
Stephenson, J. A., Scio.
Stewart, C. M., Hume.
Stillman, E. M., Andover.
Swan, J. C., Richburgh.
Thomas, T. S., Black Creek.
Titus, M. B., Allentown.
Wakeley, B. C., Angelica.
Waterman, L. G., Centerville.
Whitwood, J. R., Friendship.
Willard, A. E., Friendship.
Willard, E. H., Friendship.
Young, J. C., Cuba.

Number of Members, 50.

BROOME COUNTY.

BROOME COUNTY MEDICAL SOCIETY.

(Organized July 4th, 1805.)

MEETINGS—Annual, first Tuesday in October; quarterly, first Tuesday in January, April and July.

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Officers. (*October*, 4, 1881.)

C. B. Richards, President.
Dwight Dudley, Vice-President.
J. H. Chittenden, Secretary.
D. S. Burr, Treasurer.

Censors.

S. P. Allen, George Burr, J. G. Orton, C. D. Spencer, L. D. Witherill,

Delegate to State Medical Society.

L. D. Witherill.

Committee on Hygiene.

D. S. Burr.

Members.

Allen, S. P., Whitney's Point.
Andrews, A. W. K., Binghamton.
Appley, J. D., Hancock, Del. Co., N. Y.
Bassett, William, Binghamton.
Beardsley, Harvey F., New Ohio.
Booth, J. W., West Colesville.
Brooks, Walter A., Binghamton.
Burr, George, Binghamton.
Burr, Daniel S., Binghamton.
Bullock, Martin, Chenango.
Butler, William, Maine.
Carr, H. A., Chenango Forks.
Chittenden, J. H., Binghamton.
Clark, DeWitt C., Lisle.
Crafts, E. G., Binghamton.
Dudley, Dwight, Maine.
Dutcher, E. W., Nineveh.
Edson, L. C., Windsor.
Edwards, C. C., Binghamton.
Ely, H. O., Binghamton.
Foster, S. B., Vestal.
Griffin, Lansing, Binghamton.
Guy, E., Harpersville.
Hall, Gordon K., Binghamton.
Hall, H. C., Lisle.
Hall, Owen C., Whitney's Point.
Harrington, S. H., Chenango Forks.
Hayes, F. M., Lisle.
Hayes, P. A., Afton.
Hinds, E. P., Great Bend, Pa.
Jackson, D. P., Binghamton.
Johnson, J. H., Binghamton.
Kenyon, Benjamin, Triangle.
Knapp, W. H., Union Center.
Knox, William S., Binghamton.
Lamb, F. D., Great Bend, Pa.
Mulheron, Edward, Binghamton.
Orton, J. G., Binghamton.
Piersons, George E,, Kirkwood.
Putnam, F. W., Binghamton.
Richards, C. B., Binghamton.
Spencer, C. D., Binghamton.
Stillson, A. B., Windsor.
Taylor, A. F., Castle Creek.
Van Alstine, J. L., Binghamton.
Van Husen, H. I., Binghamton.
Wells, Emily H., Binghamton.
Wilsey, O. J., Binghamton.
Whitney, J. S., Union.
Whitney, W. W., Union.
Witherill L. D., Union.
Youngs, O. H., Sidney Center, Delaware County, N. Y.

Number of Members, 52.

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CATTARAUGUS COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF CATTARAUGUS.

MEETINGS—Annual, at Ellicottsville, the first Wednesday of June; quarterly, at such place as each previous meeting may direct.

Officers. (*June* 7, 1882.)

A. D. Lake, President.
E. S. Stewart, Vice-President.
George Lattin, Secretary.
Ira L. Bronson, Treasurer.

Censors.

F. C. Beales, Wallace Sibley, H. S. Smith.

Delegates to State Medical Society.

_____ _____ _____

Committee on Hygiene.

A. D. Lake, C. H. Bartlett, _____

Members.

Ashley, H. J., Machias.
Babcock, Horace, Gowanda.
Bartlett, C. H., Olean.
Beale, Fred C., Ellicottsville.
Bedient, S. S., Little Valley.
Bissell, M. C., Limestone.
Bronson, Ira L., Hinsdale.
Bullock, Zenas G., Allegany.
Burlingame, E. J., Sandusky.
Cheney, E. M., East Randolph.
Day, C. O., Salamanca.
Dresser, Elijah, East Otto.
Eddy, John L., Olean.
Findlay, F. D., Franklinville.
Follett, M. C., Olean.
Hubbell, A. A., Leon.
King, Thomas J., Machias.
Lake, A. D., Perrysburgh.
Lattin, George, Cattaraugus.
Nichols, James, Limestone.
Pool, S. V., Otto.
Saunders, Nelson, Randolph.
Sibley, Wallace, Portville.
Smith, H. S., Ellicottsville.
Stewart, E. S., Ellicottsville.
Terry, Ransom, Ischua.
Tompkins, O. A., East Randolph.
Torrey, Edward, Hinsdale.
Twomley, Lyman, Little Valley.
Van Aernam, Henry, Franklinville.
Walker, H. D., Franklinville.
Williams, James I., Ellicottsville.

Number of Members, 32.

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CAYUGA COUNTY.

CAYUGA COUNTY MEDICAL SOCIETY.

(Organized August 7, 1806)

MEETINGS—Annual, second Wednesday in June; semi-annual, second Wednesday in December. Regular meetings, the second Wednesday in each month.

(*Officers. June* 14, 1882.)

Frank Hoxie, President.
Nettie E. Jenkins, Vice-President.
F. M. Hamlin, Secretary and Treasurer.

Censors.

Delegates to State Medical Society.

Frank Kenyon, John Gerin.

Members.

Andrews, Lucius C., Venice Centre.
Baker, E. P., Aurora.
Bates, C. C., 161 W. Genesee st., Auburn.
Bentley, M. O., Weedsport.
Blood, N. D., Ira.
Briggs, L., 163 W. Genesee st., Auburn.
Brinkerhoff, T. S., 1 Garden st., Auburn.
Button, James D., 15 Grover st., Auburn.
Cheesman, W. S., 6 Grover st., Auburn.
Creveling, J. P., 22 South st., Auburn.
Clark, O. C., Weedsport.
Clark, Philo, King's Ferry.
Coleman, H. H., King's Ferry.
Cox, William T., Moravia.
Cummings, A. S., Cayuga.
Dimon, Theodore, 10 William st., Auburn.
Dudley, F. A., King's Ferry.
Eldridge, E. J., Sennett.
Fisher, Charles A., Victory.
Fordyce, B. A., Union Springs.
Forman, E. S., Meridian.
Fosgate, Blanchard, 65 South st., Auburn.
George, C. L., 155 W. Genesee st., Auburn.
Gerin, John, 70 North st., Auburn.
Groot, Cornelius A., Cato.
Hamlin, F. M., 1 William st., Auburn.
Henckel, Emil, 113 Genesee st., Auburn.
Horton, J. H., Kelloggsville.
Hoxie, B. K., 42 Elizabeth st., Auburn.
Hoxie, Frank, Fleming.
Jenkins, J. M., 14 William st., Auburn.
Jenkins, Nettie E., 14 William st., Auburn.
Kales, J. W., Union Springs.
Kenyon, Frank, Scipio.
Kenyon, Mary, Moravia.
Kyle, W. S., Martville.
Laird, William, 98 Wall st., Auburn.
Luce, W. O., 12 William st., Auburn.
McCarthy, Hiram, Weedsport.
MacDonald, C. F., State Asylum for Insane Criminals, Auburn.
Monroe, David, 39 Franklin st., Auburn.

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Plumb, Charles G., Owasco.
Putnam, Frank, Locke.
Sanford, Amanda, 28 South st., Auburn.
Shank, A. R., 12 James street, Auburn.
Silvers, G. M., Sherwood.
Stewart, A. D., Port Byron.
Voorhees, Sheldon, 15 Franklin st., Auburn.
White, Alanson, Fosterville.
Willard, Sylvester, 203 W. Genesee street, Auburn.

Number of Members, 50.

CHAUTAUQUA COUNTY.

CHAUTAUQUA COUNTY MEDICAL SOCIETY.

MEETING—Annual, second Tuesday in July; semi-annual, second Tuesday in January.

Officers. (*July* 12, 1881.)

H. J. Dean, President.
J. J. Towle, Vice-President.
J. F. Pratt, Secretary and Treasurer.

Censors.

Laban Hazeltine, Fred Jaekel, F. A. Beebe.

Delegates to State Medical Siciety.

H. B. Osborne. H. R. Rogers.

Members.

Ames, Edward, Sherman.
Armstrong, Mary Mrs., Jamestown.
Avery A. R., Forestville.
Beebe, F. A., Mina.
Beebe, J. A., Westfield.
Bemus, W. M., Jamestown.
Bemus, W. P., Jamestown.
Benjamin, M. N., Fredonia.
Blackham, G. E., Dunkirk.
Boyd, E. E., Ashville.
Chace, Wm., Mayville.
Dean, H. J., Brocton.
Deck, T. F., Ripley.
Decker, O. F., Dunkirk.
Ford, S. E., Clymer.
Glidden, H. H., Panama.
Hall, H. P., Jamestown.
Hazeltine, G. W., Jamestown.
Hazeltine, Laban, Jamestown.
Heard, A. B., Ripley,
Ingraham, H. D., Kennedy.
Jackson, F. S., Dunkirk.
Jaekel Fred, Dunkirk.
Lenhart, J. J., Ellery.
Lewis, John C., Panama.
McWharf, J. M., Dunkirk.
Moore, M. S., Fredonia
Osborne, H. B., Sherman.
Parsons, A. B., Jamestown.
Pratt, J. F., Mayville.
Record, H. A., Mayville.
Rogers, H. R., Dunkirk.
Ross, Artemas, Clymer.
Schermerhorn, B., Sherman.

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Shaw, O. C., Kennedy.
Skinner, Aaron, Ashville.
Smith, A. H., Sinclairville.
Smith, S. M., Dunkirk.
Spencer, John, Westfield.
Spencer, W. G., U. S. Army.
Stevens, A. A., Sinclairville.
Stockton, C. G., Buffalo, Erie county.
Strong, T. D., Westfield.
Towle, J. J., Jamestown.
Walling, P. A., Clymer.
Waterhouse, A., Jamestown.
Wiggins, J. H., Jamestown.
Wilson, D. J., Findley's Lake.
Wilson, H., Mina.
Wilson, T. C., Dewittville.

Number of Members, 50.

CHEMUNG COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF CHEMUNG.

(Organized May 3, 1836.)

MEETINGS—Annual, third Tuesday of June; quarterly, in September, December and March.

Officers. (*June* 20, 1882.

Henry Flood, President.
L. W. Bailey, Vice-President.
John E. Eldred, Secretary.
William Woodward, Treasurer.

Censors.

William C. Wey, John E. Weaver, J. K. Stanchfield.
H. S. Chubbuck, T. H. Squire.

Delegate to State Medical Society.

William Woodward.

Members.

Bailey, L. W., Millport.
Baker, A. H., Wellsburg.
Beard, George M., Millport.
Brown, C. W., 312 W. Church st., Elmira.
Brown, C. W. M., 251 Baldwin st., Elmira.
Bush, R. P., Horseheads.
Chase, Z. F., 760 E. Church st., Elmira.
Chubbuck, H. S., 258 Baldwin st., Elmira.
Davis, William H., Horseheads.
Dundas, T. A., 128 W. Water st., Elmira.
Eldred, John E., 206 S. Main st., Elmira.
Flood, J. M., 212 E. Water st., Elmira.
Flood, Henry, 403 Lake st., Elmira.
Flood, P. H., 501 E. Water st., Elmira.
Ford, Edward L., Chemung.
Gee, J. W., Van Ettenville.
Gere, C. S., Chemung.
Gere, Ebenezer, Chemung.
Hart, Ira F., 306 E. Church st., Elmira.
Hill, J. Stewart, 151 Lake st., Elmira.

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Jakeway, O. A., Breesport.
Krackowizer, E. W., 215 W. Church st., Elmira.
Messenger, N. Sanford, Breesport.
Moroney, J., 125 W. Water st., Elmira.
Parke, F. B., Baldwin.
Peebles, Corbett, Big Flats.
Price, J. H., 202 E. Water st., Elmira.
Purdy, H. H., 201 Baldwin st., Elmira.
Reilly, E. A., junction Lake street and Madison avenue, Elmira.
St. Croix, P. L., ———
Smith, J. F., Wellsburg.
Spaulding, C. M., 389 W. Water st., Elmira.
Squire, C. L., 409 E. Church st., Elmira.
Squire, T. H., 409 E. Church st., Elmira.
Stanchfield, J. K., 108 Main st., Elmira.
Taylor, Edwin C., Big Flats.
Watkins, M. S., 522 Penn. ave., Elmira.
Weaver, John E., 148 W. Water st., Elmira.
Wey, Hamilton D., cor. Main and Second streets, Elmira.
Wey, William C., cor. Main and Second streets, Elmira.
Woodward, Chas., 262 Baldwin st., Elmira.
Woodward, George H., Big Flats.
Woodward, William, Big Flats.

Number of Members, 43.

Non-Resident Members.

Allen, E. P., Athens, Pa.
Chilson, Reuben R., Bentley Creek, Pa.
Cole, J. H., Gillett, Pa.
Granger, L., Lawrenceville, Pa.
Mills, Edward, Ulster, Pa.
Morrill, I. J., 100 Lake st., Elmira.
Voorhees, Charles, Daggett's Farm, Pa.

CHENANGO COUNTY.

CHENANGO COUNTY MEDICAL SOCIETY.

(Organized in 1806.)

MEETINGS—Annual, second Tuesday in January; semi-annual, second Tuesday in June; tri-annual, second Tuesday in October.

(*Officers. January* 10, 1882.)

E. D. Hayward, President.
L. J. Brooks, Vice-President.
D. A. Gleason, Secretary.
G. W. Avery, Treasurer.

Censors.

(None Elected.)

Delegate to State Medical Society.

M. D. Spencer.

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Members.

Avery, G. W., Norwich.
Bartoo, Jesse E., Greene.
Beardsley, W. H., Coventry.
Beecher, H. H., Norwich.
Birdsall, H. R., Greene.
Blair, Louis P., McDonough.
Brooks, L. J., Norwich.
Burgess, Vincent, Brisben.
Church, Alvin, Columbus.
Clark, R. M., Guilford.
Cook, J. B., Afton.
Copley, H. D., Bainbridge.
Crumb, DeWitt, South Otselic.
Douglas, George, Oxford.
Dwight, Thomas, Preston.
Dye, H. S., New Berlin.
Ensign, E. L., McDonough.
Evans, R. D. L., Bainbridge.
Galt, Eleanor, Norwich.
Gardiner, H. S., Hamilton.
Gibson, S. C.. South New Berlin.
Gleason, D. A., Oxford.
Guy, J. D., Coventry.
Halbert, Horace, Pitcher.
Hand, S. M., Norwich.
Hayes, P. A., Afton.
Hayward, E. D., Columbus.
Hazard, A. C., New Berlin.
Jameson, J. T., South Otselic.
Johnson, L. M., Greene.
Lee, D. M., Oxford.
Lewis, J. V., North Norwich.
Loomis, D., New Berlin.
Lowe, A. S., Smithville.
Lyman, E. S., Sherburne.
Lyman, H. C., Sherburne.
McFarland, S. F., Oxford.
Meacham, I. D., Bainbridge.
Mosher, D. J., Norwich.
Noyes J. B., New Berlin.
Odell, E., Unadilla, Otsego Co.
Ormsby, B. J., Plymouth.
Packer, Thurston G., Smyrna.
Place, John F., Sherburne.
Purdy, C. M., Norwich.
Purdy, L. J., Smithville.
Purple, W. D., Greene.
Rogers, E. T., Smithville Flats.
Sands, W. G., Oxford.
Smith, B. F., Mt. Upton.
Spencer, M. D.. Guilford.
Stuart, W. H., Norwich.
Thorp, J. W., Oxford.
Thorp, L. E., Butternuts.
Walker, James R., South New Berlin.
White, Homer C., Earlville.
Williams, G. O., Greene.
Wood, M. M., Greene.

Number of Members, 58.

CLINTON COUNTY.

CLINTON COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in January; semi-annual, second Tuesday in July.

Officers. (*January* 10, 1882.)

C. H. Bidwell, President.
A. W. Fairbank, Vice-President.
E. M. Lyon, Secretary.
G. D. Dunham, Treasurer.

Censors.

C. W. Arthur, A. W. Fairbank, E. S. Howe.

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Delegate to State Medical Society.

L. C. Dodge.

Members.

Arthur, Chas. W., Rogersfield.
Bidwell, Charles H., Mooers.
Chandler, Joel, Mooers.
Coit, W. N., Champlain.
Daggett, W. S., Champlain.
Dodge, L. C., Rouse's Point.
Dunham, G. D., Plattsburgh.
Fairbank, A. W., Chazy.
Fulton, J. M., Beekmantown.
Haynes Charles S., Saranac.
Haynes, S., Saranac.
Haynes, T. S., LaColle, Prov. Quebec.
Holcomb, O. A., Peru.
Honsinger, W. S., West Chazy.
Honsinger, W. T., West Chazy.
Howe, E. S., Black Brook.
Hyde, Romeo E., Beekmantown.
Kellogg, D. S., Plattsburgh.
La Rocque, J. H. Plattsburgh.
Ladd, J., Peru.
Letourneau, G. E., Rouse's Point.
Lyon, E. M., Plattsburgh.
Nichols, T. B., Plattsburgh.
Parsons, N. S., Schuyler's Falls.
Pickett, F. A., Redford.
Riley, A. W., Clintonville.
Riley, O. H., Mooers Forks.
Rust, Hiram H., Ellenburgh.
Smith, J. H., Dannemora.
Vaughn, C. B., Morrisonville.
Woodward, D. B., Ellenburgh.
Woodwarth, J. D., Redford.

Number of Members, 32.

COLUMBIA COUNTY.

COLUMBIA COUNTY MEDICAL SOCIETY.

MEETINGS—Annual; first Tuesday in October at City Hall, Hudson, N. Y.; semi-annual, first Tuesday in June at Chatham, N. Y.

Officers. (*October* 4, 1881.)

Crawford E. Fritts, President.
*George F. Smith, Vice-President.
Milford L. Bates, Secretary and Treasurer.

Censors.

P. W. Shufelt, C. E. Fritts, G. E. Benson,
G. P. Salmon, H. Lyle Smith.

Delegate to State Medical Society.

Thomas Wilson.

*Deceased, since annual meeting.

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Members.

Allen, J. H., Churchtown.
Bates, Milford L., Canaan Four Corners.
Bates, Xyris T., New Lebanon.
Benham, John C., Hudson.
Benson, George E., Hudson.
Coffin, Silas N., New Concord.
Dickinson, G. F., East Chatham.
Fritts, Crawford E., Hudson.
Gordon, D. H., Copake.
Hasbrouck, Cornelius J., Valatie.
Horton, Jacob, Livingston.
Lockwood, Jordan W., Philmont.
Mercer, William D., Harlemville.
Mesick, N. H., Glencoe Mills.
Niles, Edgar C., Philmont.
Palmer, Elton J., Mellenville.
Pierce, George A., Lebanon Springs.
Pomeroy, George P. K., Stuyvesant.
Pruyn, P. V. S., Kinderhook.
Rossman, George W., Ancram.
Salmon, George P., Hudson.
Schermerhorn, Isaac M., Stottville.
Shufelt, P. W., East Taghkanic.
Smith, H. Lyle, Hudson.
Smith, William O., Germantown.
Stickles, William H., Jr., Philmont.
Tygert, Martin, Stuyvesant Falls.
VanDeusen, A. R., Claverack.
Vedder, R. H., Chatham Centre.
Westlake, H. G., Hillsdale.
Wheeler, J. T., Chatham Village.
Whitbeck, Volkert, Hudson.
Wilson, Thomas, Claverack.

Number of Members, 33.

Honorary Members.

Barton, Thomas, Tivoli.
Cole, John H., Claverack.
Holsapple, William H., Hudson.
Mesick, Richard H., Mellenville.

CORTLAND COUNTY.

CORTLAND COUNTY MEDICAL SOCIETY.

(Organized August 10, 1808.)

MEETINGS—Annual, the second Wednesday in June; semi-annual, the second Wednesday in December.

Officers. (*June* 14, 1882.)

Marcellus R. Smith, President.
Charles E. Bennett, Vice-President,
Caleb Green, Secretary and Treasurer.
Frederick Hyde, Librarian.

Censors.

D. C. Clark,
J. W. Hughes,
H. C. Hendrick,
S. C. Webb.
M. G. Hyde.

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Delegate to State Medical Society.

Homer O. Jewett.

Committee on Hygiene.

C. Green. H. C. Hendrick.

Members.

Angel, Jerome, Union Valley.
Barnes, E. H., Marathon.
Barnes, N. R., Cincinnatus.
Bennett, Charles E., Cortland.
Bradford, George D., Homer.
Bradford, G.W., Syracuse, Onondaga Co.
Briggs, Isaac S., Dryden, Tompkins Co.
Burdick, Daniel W., Homer.
Clark, Dewitt C., Marathon.
Dana, Henry T., Cortland.
Fitch, Wm., Dryden, Tompkins Co.
Goodyear, Franklin, Cortland.
Green, Caleb, Homer.
Green, Frank H., Homer.
Halbert, M. L., Cincinnatus.
Head, A. L., Homer.
Hendrick, H. C., McGrawville.
Hughes, J. W., Cortland.
Hunt, Herman D., Preble.
Hyde, Frederick, Cortland.
Hyde, Miles G., Cortland.
Jewett, Homer O., Cortland.
Knapp, John H., Harford.
Maxson, George W., Scott.
McBirney, Edward W., Willet.
Nelson, Judson C., Truxton.
Read, A. D., Marathon.
Smith, Marcellus R., Cincinnatus.
Tripp, J. D., Virgil.
Webb, Sumner C., Homer.
Wheelock, Francis G., DeRuyter, Madison County.

Number of Members, 31.

DELAWARE COUNTY.

DELAWARE COUNTY MEDICAL SOCIETY.

(Organized July 1, 1806.)

MEETINGS—Annual, second Tuesday in June; semi-annual, second Tuesday in January.

Officers, (*June* 13, 1882.)

Wm. C. Telford, President.
James M. Donnelly, Vice-President.
F. H. McNaught, Secretary.
J. Calhoun, Treasurer.

Censors.

Wm. C. Telford, H. A. Gates, J. A. Gladstone.

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Delegates to State Medical Society.

D. H. Mann, I. Wilcox.

Members.

Allabeen, O. M., Margarettville.
Bassett, G. P., Colchester.
Bourne, I. C., Masonville.
Buckley, H. N., Delhi.
Buckley, J. J., Delhi.
Calhoun, J., Delhi.
Cartwright, S. S., Roxbury.
Churchill, S. E., Stamford.
Close, E. W., Hamden.
Crawford, Wm., Andes.
Decker, S., Griffin's Corners.
Dickson, C. J., Bovina.
Donnelly, J. M., Davenport.
Edwards, T. M., Franklin.
Formen, S., Kortright.
Gallup, E. W., Stamford.
Gates, H. A., Delhi.
Gibbs, E. T., Kortright.
Gladstone, J. A., Andes.
Heimer, W. D., Hamden.
Jacobs, F., Delhi.
Johnson, H. B., Hamden.
Mann, D. H., Delhi.
Matthews, J. R., Kortright.
McLaurey, J. S., Walton.
McNaught, F. H., Hobart.
McNaught, J. S., Stamford.
McNaught, T. S., Stamford.
Montgomery, A. C., Colchester.
Newkirk, J., Roxbury.
Ogden, H. E., Walton.
Olin, S., Meredith Hollow.
Pettingill, S. C., Hancock.
Radiker, B. E., Deposit.
Smith, George, Franklin.
Smith, H. M., Kortright.
Snow, E. E., Walton.
Sullard, A. E., Franklin.
Telford, W. C., Brushland.
Thompson, R. M., Andes.
Wight, T., Andes.
Wilcox, Ira, Franklin.
Wright, J. N., Grand Gorge.

Number of Members, 43.

DUTCHESS COUNTY.

DUTCHESS COUNTY MEDICAL SOCIETY.

(Organized in 1806.)

MEETINGS—Annual, second Wednesday in January, at Poughkeepsie; semi-annual, second Wednesday in June.

Officers, (*January* 11, 1882.)

Per Lee Pine,* President.
N. M. Van Duser, Vice-President.
Guy C. Bayley, Secretary.
C. H. Langdon, Treasurer.

* Deceased, since the annual meeting.

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Censors.

Alfred Hasbrouck,
Desault Guernsey,
Robert K. Tuthill,
E. H. Gerow.

Delegates to State Medical Society.

Edwin Barnes,
Alfred Hasbrouck.

Members.

Baker, B. N., Rhinebeck.
Barnes, Edwin, Pleasant Plains.
Barton T. F., Madalin.
Bayley, Guy C., Poughkeepsie.
Berry, Charles H., Dover Plains.
Bird, J. S., Hyde Park.
Bolton, Edward C., Poughkeepsie.
Bookee, Jacob, Poughkeepsie.
Brown, Paul R., Salt Point.
Cahart, E., Madalin.
Campbell, C. N., Poughkeepsie.
Card, Edson, Jr., Pleasant Valley.
Carey, George, Madalin.
Carroll, R. J., Red Hook.
Carter, Norris M., Poughkeepsie.
Chapman, G. B., Amenia Union.
Cleveland, J. M., Poughkeepsie.
Codding, G. H., Amenia.
Cole, C. E., Mount Ross.
Conklin, W. J., Fishkill.
Cookingham, H. L., Red Hook.
Cooper, John R., Poughkeepsie.
Cornell, Isaac M., New Hamburgh.
Coutant, J. C., Poughkeepsie.
Cruse, Thomas R., Wappinger's Falls.
Curtis, C. P., Fishkill.
Doughty, J. H., Matteawan.
Devan J. N., Pleasant Valley.
Fink, A. T., Freedom Plains.
Forman, J. H., Hopewell.
Gerow, Elizabeth H., Poughkeepsie.
Guernsey, Desault, Amenia.
Haidlauf, J., Poughkeepsie.
Hammond, T., Dover Plains.
Hasbrouck, Alfred, Poughkeesie.
Herrick, W., Milan.
Hoag, A. F., City.
Hopkins, W. H., Hyde Park.
Hoyt, Edwin, Shultzville.
Hull, William B., Poughkeepsie.
Hunting, T. M., Pine Plains.
Huntington, George, La Grangeville.
Hustis, C., Matteawan.
Kellogg, A. O., Poughkeepsie.
Kinkead, J., Poughkeepsie.
Kittredge, C. M., Fishkill-on-Hudson.
Knapp, D. A., North Clove.
LaGrange, J. H., Glenham.
Lamb, I. C. T., Poughkeepsie.
Langdon, Charles H., Poughkeepsie.
Linsly, W. B., Pawling.
Losee, E., Bengall.
Losee, John, Madalin.
Mead, I. N., Amenia.
Moith, J. E., Fishkill.
Nicholson, C. A., Beekman.
Northrup, M. C., South Dover.
Parker, Edward H., Poughkeepsie.
Payne, J. O., Poughkeepsie.
Pierce, H., Pawling.
Pine, P. L., Poughkeepsie.
Pingry, J. O., Mill Brook.
Pultz, M. T., Standfordville.
Rockwell, L. E., Amenia.
Schenck, S. P. Jr., Matteawan.
Slack, Henry, Fishkill-on-Hudson.
Stevenson, W. G., Poughkeepsie.
Stillman, S., Millerton.
Sutton, G. L., East Fishkill.
Traver, I. H., Pleasant Valley.
Tripp, C. H., Washington.
Tuthill, R. K., Poughkeepsie.
Underhill, A., New Hackensack.
Upton, G., La Grangeville.
Van Duser, A. E., Poughkeepsie.
Van Wyck, E., New Hackensack.
Ward, D. B., Poughkeepsie.
Webb, De Witt, Poughkeepsie.
Webster, Helen W., Poughkeepsie.
Wellman, G. W., Dover Plains.

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White, Lewis H., Fishkill.
White, Howell, Fishkill.
Wilbur H. C., Pine Plains.
Williamson, Phœbe T., Washington.
Wilson, J. P., Poughkeepsie.

Number of Members, 85.

Honorary Members.

Demming, R., Sharon, Conn.
Fountain, H., Yorktown, N. Y.
Helm, W. H., Sing Sing, N. Y.
La Monte, Austin, Carmel, N. Y.
Murdock, G. W., Cold Spring, N. Y.
Lent, F. C., Cold Spring, N. Y.
Weir, R. F., New York, N. Y.
Wheeler, N. W., Patterson, N. Y.

ERIE COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF ERIE.

MEETINGS—Annual, second Tuesday in January; semi-annual, second Tuesday in June.

Officers, (*January* 10, 1882.)

T. M. Johnson, President.
S. E. S. H. Nott, Vice-President.
A. M. Barker, Secretary.
F. W. Abbott, Treasurer.
James B. Samo, Librarian.

Censors.

Edward Storck, A. H. Briggs, H. R. Hopkins,
F. F. Hoyer, P. W. Van Peyma.

Delegates to State Medical Society.

F. F. Hoyer, H. R. Hopkins, Lucien Howe,
S. E. S. H. Nott, A. M. Barker.

Committee on Hygiene.

A. H. Briggs, C. C. F. Gay, E. Storck,
J. W. Keene, A. M. Barker.

Members.

Abbott, F. M., 223 Franklin street.*
Abbott, Geo., White's Corners.
Allen, Jabez, East Aurora.
Andrews, Judson B., State Insane Asylum, Forest avenue.
Armstrong, J. S., 404 Main street.

*Where no town is mentioned, Buffalo is to be understood.

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Atwater, S. L., Buffalo.
Bailey, D. A., 1227 Niagara street.
Ballard, Edward H., Buffalo.
Banta, R. L., 330 Elk street.
Barker, Arthur M., 137 West Tupper st.
Barnes, E. R., 18 Exchange street.
Barrett, W. C., 11 West Chippewa street.
Barry, T. L., Spring Brook.
Bartlett, F. W., 112 Ellicott street.
Bartow, Bernard, 220 Franklin street.
Bidaman, W. D., 209 Vermont street.
Bissell, E. S., Main street.
Boardman, John, 16 Court street.
Boies, L. F., East Hamburgh.
Bourne, C. W., Boston, N. Y.
Brecht, F. E. L., 353 William street.
Briggs, A. H., 191 E. Seneca street.
Brooks, A. J., Marilla.
Brown, G. L., 68 East Eagle street.
Brush, E. N., Utica, N. Y.
Burt, Franklin, 307 Elk street.
Burwell, George N., 130 Pearl street.
Campbell, R. E., 121 West Mohawk st.
Cary, Charles, 210 Delaware street.
Champlin, C. G., 1872 Niagara street.
Chester, C. O., 150 Bryant street.
Clark, Edward, 300 Michigan street.
Coakley, J. B., cor. Delaware and Tupper streets.
Crawford, A. H., 274 Swan street.
Crego, Floyd S., State Insane Asylum, Forest avenue.
Cronyn, John, 55 West Swan street.
Cronyn, J. L. C., 55 West Swan street.
Dagenais, A 348 East Eagle street.
Daggett, B. H., 49 South Division street.
Dambach, John, 415 Michigan street.
Daniels, Clayton M., 82 North Pearl st.
Davison, A. R., 598 Main street.
Dayton, C. L., 1872 Niagara street.
Dayton, L. P., 15 Niagara street.
Devening, D., 470 Michigan street.
Diehl, Conrad, 32 West Genesee street.
Dorland, E. T., 384 East Swan street.
Dorr, S. G., 809 William street.
Earl, W. C., 1541 Niagara street.
Eisbein, C. D., 394 Broadway.
Elwood, H. S., 9 West Mohawk street.
Folwell, H. S., 122 Pearl street.
Fowler, Joseph, 472 Niagara street.
Frederick, C. C., 64 Richmond avenue.
Gail, W. H., East Aurora.
Gay, C. C. F., 180 Franklin street.
Gness, Carl H., 22 Main street.
Granger, W. D., State Insane Asylum, Forest avenue.
Greene, W. D , 444 Elk street.
Greene, J. C., 124 East Swan street,
Greene, S. S., 444 Elk street.
Grove, Benj. H., 7 West Chippewa street.
Haberstro, J., County Hospital.
Hancock, A. S., cor. 7th and George sts.
Harrington, D. W., 1430 Main street.
Hartwig, M., 88 East Huron street.
Harvey, C. W., 16 West Tupper street.
Harvey, L. F., 16 West Tupper street.
Hauenstein, John, 499 Washington street.
Hebenstreit, R., 166 Broadway.
Hill, S. D., 190 Delaware street.
Hoffmeyer, John A., 1872 Niagara street.
Hopkins, H. R., 164 Franklin street.
Howe, Lucien, 5 West Chippewa street.
Hoyer, F. F., Tonawanda.
Ingraham, H. D., 51 West Genesee street.
Jackson, W. H., Springville.
Johnson, T. M., 10 South Division street.
Kamerling, B. 171 Bryant street.
Keene, S. W., 61 South Division street.
Kiefer N. T., Erie Co. Alms House.
King, J. E., 16 East Seneca street.
Krombein, L., 246 Elm street.
Krug, Julius, 560 Broadway.
Lapham, G. H., East Aurora.
Lapp, Henry, Clarence.
Little, Edward, 8 South Division street.
Long, L. A., 31 West Eagle street.
Lothrop, B. L., 81 Breckenridge street.
Lothrop, Thomas, 260 Pearl street.
Lynde, U. C., 86 North Division street.
McBeth, C. A., 10 South Division street.
Mackay, G. E., 39 Franklin street.
Macniel, D., 9 East Seneca street.
McPherson, G. W., Lancaster.
Mann, M. D., 610 Main street.
Marcley, J. Irving, 1859 Niagara street.
Miller, J. G., Lancaster.
Miller, Wm. V., Prospect avenue, corner Vermont street.
Miner, J. F., 978 Main street.
Mixer, S. F., 158 East Swan street.
Moody, Mary B., 187 North Pearl street.
Murray, H. B., Tonawanda.

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Murray, W. D. Tonawanda.
Mynter, H., 195 Franklin street.
Nichell, H., 80 Sycamore street.
Nott, S. E. S. H., White's Corners.
O'Brien, E. C. W., 16 East Seneca street.
Parkwood, Wm. J., 406 East Genesee st.
Parker, L. P. L., Akron.
Pattison, G. W., 17 Court street.
Peterson, Frederick, 43 W. Huron street.
Pettit, J. A., 526 South Division street.
Phelps, W. C.. 150 Allen street.
Potter, Samuel, Lancaster.
Potter, W. W., 306 Franklin street.
Pride, J. B., Alden.
Remner, Mary E., 62 Clinton street.
Ring, Charles A., Erie Co. Insane Asylum, Buffalo Plains.
Ring, Wm., 364 Niagara street.
Rochester, T. F., 216 Franklin street.
Samo, J. B., 396 Pearl street.
Shade, Louis, 244 Goodelle street.
Shaw, O. C., Hamburgh.
Slacer, W. H., 1845 Niagara street.
Sloan, James, 335 Elk street.
Smith, James S., 66 High street.
Snow, Irving M., Buffalo.
Sonnick, Peter, 89 Broadway.
Storck, E., 436 Washington street.
Storck, E. E., 247 Swan street.
Strong, O. C., Colden.
Strong, P. H., 120 Niagara street.
Sutherland, A. R., Tonawanda.
Sweetland, G., Evans.
Thompson, Justin G., Angola.
Tobie, E., 12 East Mohawk street.
Trowbridge, J. S., 273 Niagara street.
Trull, H. P., Williamsville.
Van Peyma, J. W., Lancaster.
Van Peyma, P. W., 499 William street.
Van Peyma, W., Clarence Center.
Vaughan, F. O., 438 Swan street.
Volker, Louis C., 433 E. Genesee street.
Wall, Charles A., 111 College street.
Walsh, J. J., 259 Broadway.
Warren, S. H., 19 Milnor street.
Wasson, W. A., 746 Seneca street.
Wenz, J., Lancaster.
Wetzel, Charles H., 564 East Genesee st.
Wheeler, J. C., Marilla.
Willett, Phœbe, East Hamburgh.
Williams, A. W., 116 Glenwood avenue.
Willoughby, M., 1385 Main street.
Wyckoff, C. C., 482 Delaware street.
York, G. W., 115 Franklin street.

Number of Members, 151.

ESSEX COUNTY.

ESSEX COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, fourth Tuesday in June, at Elizabethtown. Other meetings at such time and place as the Society may direct.

Officers. (*June* 20, 1882.)

Abiathar Pollard, President.
P. W. Barber, Vice-President.
S. E. Hale, Secretary.
Edward F. Edgerly, Treasurer.

Censors.

C. Sawyer, F. E. Kendall, A. J. Merrill.

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Delegate to State Medical Society.

Conant Sawyer.

Members.

Barber, Pliny W., Westport.
Barton, Lyman, Willsborough.
Cleveland, Warner, Port Henry.
Darley, Lawrence J., Elizabethtown.
D'Avignon, Francis J., Au Sable Forks.
Dickinson, S. F., Westport.
Dodge, Sidney W., Franklin Falls.
Edgerly, Edward F., Moriah Center.
Hale, Safford E., Elizabethtown.
Holcomb, Sylvester S., Upper Jay.
Hopper, Charles A., Port Henry.
Kendall, Frank E., Lower Jay.
La Bell, Martin J., Lewis.
Merrill, Albinus J., Upper Jay.
Murray, Joseph B., Crown Point.
Oliver, John N., Ticonderoga.
Palmer, Dudley, Schroon.
Pollard, Abiathar, Westport.
Robinson, Ezra A., Jay.
Saville, Robert T., Mineville.
Sawyer Conant, Au Sable Forks.
Strong, Edward T., Crown Point.
Sweatt, Frank E., Willsborough.
Turner, Melvin H., Hammondville.
Warner, Charles B., Port Henry.
Warner, Joseph, Crown Point.
Warner, R. E., Port Henry.
Wilcox, Rollin C., Ticonderoga.

Number of Members, 28.

FRANKLIN COUNTY.

FRANKLIN COUNTY MEDICAL SOCIETY.

(Organized in 1814; re-organized in 1848.)

MEETINGS—Annual, third Tuesday in January; semi-annual, first Tuesday in June; quarterly, first Tuesday in September.

Officers. (*January* 17, 1882.)

L. M. Wardner, President.
Henry Furness, Vice-President.
Sidney P. Bates, Sec. and Treas.

Censors.

Theodore Gay. William Gillis. Calvin Skinner.

Delegate to State Medical Society.

A. M. Phelps.

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Members.

Babcock, L. W., Bombay.
Berry, L. M., Westville Centre.
Bates, Sidney P., Malone.
Brand, Warren M., Burke.
Crippen, Carter, Fort Covington.
Darling, Ira H., West Bangor.
Farnsworth, Hial S., Chateaugay.
Furness, Henry, Malone.
Gay, Theodore, Malone.
Gillis, William, Fort Covington.
Harwood, Watson H., Malone.
Howe, George, Chateaugay.
Jameson, H., Fort Covington.
Johnson, I. A., Chateaugay Lake.
McConnell, C., Hogansburgh.
Macfie, James, Fort Covington.
McLaren, D. C., Franklin Center.
Mott, William, Chateaugay.
Phelps, A. M., Chateaugay.
Roys, Fernando, Dickinson Center.
Rest, R. T., Moira.
Skinner, Calvin, Malone.
Smith, C. B., West Bangor.
Wardner, L. M., Brush's Mills.
Wentworth, S. S., Malone.
Wentworth, W. W., Malone.
Whyte, R. M., Ellenburgh Center, Clinton county.
Wilbur, Arthur A., East Constable.
Wilding, Robert J., Churubusco.
Woodward, Daniel B., Ellenburgh, Clinton county.

Number of Members, 30.

FULTON COUNTY.

FULTON COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Thursday in January; semi-annual, second Thursday in July, at such place as is agreed upon.

(*Officers. January* 12, 1882.)

P. R. Furbeck, President.
A. J. Avery, Vice-President.
Isaac DeZouche. Secretary.
David V. Still, Treasurer.

Censors.

R. W. Cameron. F. W. Shaffer. W. L. Johnson.

Delegate to State Medical Society.

Charles M. Lefler.

Members.

Avery, A. J., Northville.
Barker, D. N., Broadalbin.
Beach, Eugene, Gloversville.
Beebe, Frank, Johnstown.
Blake, J. F., Northville.
Burdick, John E., Johnstown.

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Cameron, Richard H., Johnstown.
DeZouche, Isaac, Gloversville.
Edwards, John, Gloversville.
Everest, Nelson, Rockwood.
Finch, H. C., Broadalbin.
Furbeck, Peter R., Gloversville.
Johnson, W. L., Johnstown.
Lefler, C. M., Gloverville.
Lefler, Jehiel, Johnstown.
McGann, Thomas, Wells, Hamilton Co.
Nellis, Charles, Johnstown.
Orton, Darius S., Northampton.
Shaffer, F. W., Gloversville.
Smith, T. D., Broadalbin.
Still, David V., Johnstown.
Thorne, J. K., Broadalbin,
Van Ness, Ira H., Osborne's Bridge.
Walrath, Adam, Laselsville.
Wood, W. C., Gloversville.
Young James K., Johnstown.

Number of Members, 26.

GENESEE COUNTY.

GENESEE COUNTY MEDICAL SOCIETY.

(Organized abont 1811.)

MEETINGS—Annual, second Tuesday in June; semi-annual second Tuesday in January, at Batavia.

Officers, (*June* 8, 1882.)

I. V. Mullen, President.
Henry Pamphilon, Vice-President.
John R. Cotes, Secretary and Treasury.

Censors.

— —. — —. — —.

Delegate to State Medical Society.

A. P. Jackson.

Members.

Barrett, S., LeRoy.
Bateman, S. C., Alabama.
Cleveland, J. F., LeRoy.
Cotes, John R., Batavia.
Crane, F. W., Corfu.
Croff, G. W., Bethany.
Croff, O. R., Bethany.
Davidson, J. C., Batavia.
Ellenwood, A. G., Attica, Wyoming Co.
Fuller, B. A., LeRoy.
Gilbert, G. B., Byron.
Gleason, G, U., South Byron,
Jackson A. P., Oakfield.
Lewis, J. M., Elba.
Morse, H. A., Batavia.
Mullen I. V., Alexander.
Mullen, John N., Alexander.
Pamphilon, Henry, Stafford.

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Pardee, Wm., Oakfield.
Rand, C. F., Batavia.
Smith, A. D., East Pembroke,
Smith, E. C., East Pembroke.
Sprague Wm. B., Pavilion.
Townsend, M. W., Bergen.
Tozier, L. L., Batavia.
Warner, I. W., Elba.
Williams, B., LeRoy.
Zarhout, A. F. G., Alabama.

Number of Members, 28.

GREENE COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF GREENE.

(Organized July 1806; re-organized October 12, 1855.)

MEETINGS—Annual, second Tuesday in May; semi-annual, second Tuesday in October; stated, second Tuesday in chea month.

(*Officers. May* 9, 1882.)

B. S. McCabe, President.
J. B. Rouse, Vice-President.
William P. McLaury, Secretary.
William B. Huestis, Treasurer.

Censors.

James Jewell, W. C. Roney, C. H. Chubb,
C. E. Willard, H. M. Simmons.

Delegate to State Medical Society.

C. H. Chubb.

Members.

Barnett, C. V., Coxsackie.
Beach, Ambrose, Coxsackie.
Benham, C. H., Prattsville.
Chubb, Chas. H., Palenville.
Conklin, George, Durham.
Cowles, Jonathan B., Durham.
Deane, James A., Catskill.
Fanning, Nelson, Catskill.
Fanning, Nelson, Jr., Leeds.
Fitch, Thomas, Prattsville.
Ford, Edwin L., Hunter.
Greene, F. S., Coxsackie.
Griffin, N. H., Cairo.
Huestis, Wm. B., Kiskatom.
Jewell, James, Catskill.
McCabe, Bradley, Greenville.
McLaury, Wm. P., Catskill.
Mackey, E. R., Catskill.
Mead, Wm. H., Windham.
Noble, George H., Cairo.
Roney, W. C., New Baltimore.
Rouse, J. B., Leeds.
Stanley, P. J., Windham.
Stevens, Wm., Cairo.

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Van Dyke, J. B., Coxsackie.
Van Slyke, A. W., Coxsackie.
Van Tassel, G. W., Freehold.
Westervelt, Alonzo G., East Durham.
Wheeler, F. A., Athens.
Wheeler, J. H., Athens.
Wight, Thomas H., Prattsville.
Willard, Chas. E., Catskill.

Number of Members 32.

Non-Resident Members.

Baldwin, Frank, Brooklyn, N. Y.
Chase, Walter B., Brooklyn, N. Y.
McLaury, A., Pleasant Valley, N. Y.
Nelson, George W., Grand Gorge, N. Y.
Stevens, William, New York.

Honorary Member.

Gouverneur M. Smith, New York.

HAMILTON COUNTY.

[Has no Medical Society.]

HERKIMER COUNTY.

HERKIMER COUNTY MEDICAL SOCIETY.

(Organized August 5th, 1806.)

MEETINGS—Annual, first Tuesday in June; semi-annual, first Tuesday in December.

Officers (*June* 6, 1882.)

John P. Sharer, President.
D. N, Walker, Jr., Vice President.
A. Walter Suiter, Secretary.
George Graves, Treasurer.
Henry A. France, Librarian.

Censors.

C. W. Hamlin,
P. A. Skiff,
I. N. Willard,
C. H. Glidden.
A. James Browne,

Committee on Hygiene.

A. Walter Suiter, Chairman.
Charles W. Hamlin.
Stephen A. Ingham.

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Delegate to State Medical Society.

A. Walter Suiter.

Members.

Barney H. G., Brockett's Bridge, Fulton County.
Bellinger, Peter F., Durango, Colorado.
Brown, Wm., Cedarville.
Browne, A. J., Newport.
Budlong, W. W., Frankfort.
Bushnell Benjamin E., Little Falls.
Bushnell, K. A., Little Falls.
Casey, J. E., Mohawk.
Christman, H. J., Columbia.
Coffin, A. D., Stittville, Oneida Co., N. Y.
Comstock, Fred. F., Ilion.
Crim, F. D., Mohawk.
Devendorf, M. D., Herkimer.
Dexter, Lyman C., Newport.
Douglass, A. J., Ilion.
Douglass, A. O., Gray.
Draper, E. M., Ilion.
Ellis, John B., Little Falls.
Fox, Eli, Mohawk.
France, H. A., Pollard.
Graves, George, Herkimer.
Garlock, Wm. D., Little Falls.
Glidden Charles H., Little Falls.
Greene, H. H., Paine's Hollow.
Hall, Charles J., Norway.
Hamlin, C. W., Middleville.
Harter, Fred. J., Moravia, Cayuga Co., N. Y.
Harter, Wm. H., Herkimer.
Holcomb, I. B., Newport.
Huntley, James F., Jr., West Winfield.
Hyland, Thomas G., Albany, N. Y.
Ingham, Silas A., Little Falls.
Ingham, Stephen A., Little Falls.
Kay, Cyrus Jr., Herkimer.
Lewis Henry, Jr., Little Falls.
Longshore, Miles, Cold Brook.
Maben, H. B., Ilion.
Miller, Adam, Jordanville.
Millington, S. R., Poland.
Moore. A. A., West Winfield.
Parkhurst, Wm. H. H., Frankfort.
Potter, Vaughn C., Starkville.
Pryne, Peter, Herkimer.
Quackenbush, Leslie R., Brockett's Bridge, Fulton county.
Rasbach, George P., Mohawk.
Rasbach, James I., Ilion.
Richter, M. R., Middleville.
Rose, James M., West Winfield.
Seaman, F. G., Seneca Falls, Seneca Co., N. Y.
Sharer, John P., Little Falls.
Skiff, P. A., Frankfort.
Southworth, Mark A., Little Falls.
Suiter, A., Walter, Herkimer.
Tibbits, William, Newville.
Walker, D. N., Ilion.
Warner, Robert W., Ilion.
Willard, I. N., Fairfield.
Young, John D., Starkville.

Number of Members 58.

JEFFERSON COUNTY.

JEFFERSON COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in January; semi-annual, second Tuesday in July; quarterly, second Tuesday in April and October.

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Officers. (*January* 10, 1882.)

J. R. Sturtevant, President.
A. B. Stevens, Vice-President.
Henry H. Deane, Secretary.
J. H. Tamblin, Treasurer.

Censors.

J. M. Crawe. W. R. Trowbridge. Jacob Daab.
L. E. Jones. Robert Clink.

Delegates to State Medical Society.

J. D. Spencer. Wm. C. Bailey.

Members.

Abell, I. H., Antwerp.
Babcock, Z. R., Lorraine.
Bailey, W. C., Adams Centre.
Ballard, S. E., Tylerville.
Benedict, A. J., Sackett's Harbor.
Blake, G. A. R., Burr's Mills.
Carlisle, E. S., Plessis.
Cheeseman, B. C., Depauville.
Church, M. K., Pierrepont Manor.
Clark, S. C., Smithville.
Clink, Frank, Redwood.
Clink, Robert, Redwood.
Crawe, J. M., Watertown.
Daab, Jacob, LaFargeville.
Deane, H. H., Watertown.
Douglass, Charles, Dexter.
Ferguson, N. D., Carthage.
Finney, J. R., Rodman.
Frame, Luke E., Depauville.
Frame, S. W., Bellville.
Graham, J. C., Keeneville, St. Lawrence Co., N. Y.
Hannahs, K., Watertown.
Hubbard, Geo. N., Carthage.
Hutchins, M. J., Redwoood.
Jewett, H. W., Chaumont.
Johnson, Charles M., Watertown.
Johnson, Parley M., Adams.
Jones, C. E.. Evans' Mills.
Jones, L. E., Evans' Mills.
Kelsey, James E., Theresa.
Lowe, A. S., Watertown.
McIllmoyle, H. A., Clayton.
Maine, F. E., Philadelphia.
Mansfield, Lois, Mrs., Watertown.
Mason L., Barnes' Corners, Lewis Co. N. Y.
Massey, W. P., Brownville.
Miller, J. H., Carthage.
McCombs, George M., Clayton.
Parker, Charles, Three Mile Bay.
Pierce, D. E., St. Lawrence.
Pierce, John, Adams.
Pratt, E. B., Brownville.
Potter, C. D., Adams Centre.
Rexford, C. M., Watertown.
Rodenhurst, DeWitt C., Ox-Bow.
Rudd, A. R., Watertown.
Sabin, George G., Stone Mills.
Sill, E., Watertown.
Smith, Allen S., Cape Vincent.
Smith, M. C., Watertown.
Spencer, H. G. P., Watertown.
Spencer, James D., Watertown.
Stevens, A. B., Black River.
Streeter, H. W., Watertown.
Sturtevant, J. R., Theresa.
Tamblin, J. H., Tylerville.
Terry W. G., Henderson.
Trowbridge E. W., Watertown.
Trowbridge W. R., Watertown.
Tyler, Wm. E., Sacketts Harbor.
Vincent, W. A., Three Mile Bay.
Ward, E. E., Pamelia Four Corners.
Watson, Lewis C., Alexandria.
Wood, J. A., Plessis.

Number of Members, 64.

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KINGS COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

MEETINGS.—This Society holds its annual meeting on the third Tuesday in January; stated meetings on the third Tuesdays of other months. All meetings are held in Brooklyn, at 398 Fulton street.

In the list of members given below, only those are included who conform with the requirements of the by-laws in respect of assessments and dues. The "Proceedings" are published about the first of every month. A "Journal and Reading Room" is open daily (except Sundays) from 10 A. M. to 10 P. M.; over eighty journals are regularly on file. The library has recently been improved by the addition of several valuable works of reference, and the best of the new medical monographs and text-books.

Officers. (*January* 18, 1882.)

C. Jewett, President.
G. G. Hopkins, Vice-President.
R. M. Wyckoff, Secretary.
W. G. Russell, Assistant Secretary.
T. R. French, Librarian.
J. R. Vanderveer, Treasurer.

Censors.

B. A. Segur. A. R. Paine. J. D. Rushmore.
A. Hutchins. B. F. Westbrook.

Delegates to State Medical Society.

J. Byrne. J. A. McCorkle. T. R. French.
G. W. Baker. F. W. Rockwell. B. F. Westbrook.
G. G. Hopkins. J. D. Rushmore. C. Jewett.
J. H. Hunt. J. C. Shaw. S. Sherwell.

Committee on Hygiene.

B. F. Westbrook. B. Edson. N. B. Sizer.

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Members.

Allaben, C. S., 525 Lafayette avenue.*
Allen, A. S.. 40 Lee avenue, E. D.
Ambrose, D., 99 Second place.
Anderson, William, 173 Union street.
Andrews, J. S., Penn. ave., East N. Y.
Armor, S. G., L. I. College Hospital.
Arnold, J. A., Hosp. Incurables, Flatbush.
Atkinson, G. H , 98 Pineapple street.
Atwood, A. D., 74 Lewis avenue.
Ayres, Benjamin, 193 Putnam avenue.
Baker, G. W., 48 Bedford avenue, E. D.
Baker, R. C., 97 Fourth street, E. D.
Baldwin, F. A., 545 Willoughby avenue.
Baldwin, N. A., 168 Tompkins avenue.
Ball John, 124 South Oxford street.
Barber, I. H., 36 Lafayette avenue.
Bernhart, M. W., 138 Kent street, E. D.
Bartlett, H, L., Flatbush.
Bartley, E. H., 386 Pacific street.
Bates, W. H., 184 Remsen street.
Bayles, H. B., 494 Third avenue.
Beardsley, W. E., 115 Clymer street, E. D.
Beasley, C. D.. 535 Bedford avenue.
Bell, A. N., 119 Second place.
Bell, L. T., 174 Jefferson street.
Bennett, W. H., 184 Sixth avenue.
Berendsohn, R., 665 Bushwick avenue.
Bird, J. R., 122 Putnam avenue.
Bliss, W. A., 292 Eighteenth street.
Bodkin, D. G., 92 Sands street.
Bowron, F. W., 259 Tompkins square.
Brady, S. J., 16 Bedford avenue, E. D.
Brandt, W. J., 380 Union street.
Briggs, B. M., 106 Willoughby street.
Bristow, A. T., 243 Clinton street.
Brodie, J. A., 205 Raymond street.
Brown, Anna M., 488 Bedford avenue.
Brush, G. W., 144 Lawrence street.
Buell, R. M., 330 Ninth street.
Bunker, S., 280 Henry street.
Bunker, H. A., 99 Sixth avenue.
Burge, J. H. H., 134 Montague street.
Burnard, H. W., 384 Jay street.
Burns, A. M., 136 Meserole ave., E. D.
Byrne, John, 314 Clinton street.
Caemmerer, W. H., 247 Baltic street.
Campbell, A., 883 St. Marks avenue.
Candidus, P., 228 South Ninth st., E. D.
Cardwell, G. A., 187 Penn street.
Carolan, E. J., 362 Bedford avenue.
Carreau, J. A., 203 Bergen street.
Catlin, A. W., 207 Greene avenue.
Chace, D. E., 23 Greene avenue.
Chapman. E. N., 95 Pierrepont street.
Chase, Walter B., 636 Willoughby ave.
Childs, S. B., 498 Classon avenue.
Church, S., 294 Clinton street.
Clark, J. E., 340 Clinton street.
Clarke, Alex. S., 132 Remsen street.
Cochran, Alex., 212 Clinton street.
Cochran, H. L., 303 Henry street.
Cochran, J. A., 212 Clinton street.
Colgan, J. P., 329 Jay street.
Colton, F. H., 136 Montague street.
Conkling, J. T., 143 Remsen street.
Conroy, W. E., 586 Franklin avenue.
Cook, C. D., 133 Pacific street.
Cooper, John, 79 St. James place.
Corbally, T. P., 590 Henry street.
Corbin, Job, 943 Gates avenue.
Corcoran, J. J., 409 Kent avenue.
Corey, Charles, 23 South Oxford street.
Coverly, J. H., 191 Washington Park.
Cowles, F. A., 230 South 4th st., E. D.
Crane, James, 163 Clinton street.
Creamer, Joseph, 60 So. Second st., E. D.
Criado, L. F., 141 Clinton street.
Cruikshank, W. J., 376 Jay street.
Crutchley, W. F., 645 Kosciusko street.
Curry, A. M., 1151 Fulton avenue.
Cushing, G. W,, 221 Schermerhorn st.
Cutter, George R., 95 Division ave., E. D.
Daly, Guy F., 275 Tompkins avenue.
Davidson, R. T., 13 Troutman street.
De Bowes, T. N., 429 Clinton street.
De La Vergne, C. E., 113 State street.
De Long, W. A., 282 So. Second st., E. D.
De Mund, F. C., New Utrecht.
Dodge, D. A., 163 Congress street.
Dower, A. J., 380 Union street.
Drake, D. K., 208 Union street.
Drury, George, 195 Adams street.
Dudley, W. H., 301 Henry street.
Dupré, Josephine A., 37 Schermerhorn street.
Duryee, G. W., 539 Marcy avenue.

*Where no name of town is given, Brooklyn is to be understood.

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Eddy, Charles, 79 Fort Green place.
Edson, Benjamin, 83 St. Mark's avenue.
Eltinge, Edgar, 658 Nostrand avenue.
Emery, Z. T., 370 Green avenue.
Ensell, J. E., 125 High street.
Eskens, F., 748 Flushing avenue.
Evans, George A., 458 Marcy avenue.
Fairbairn, H. A., 1557 Atlantic street.
Farrar, J. N., 15 Green avenue.
Fearn, Herbert, 196 Clermont avenue.
Feeley, J. F., 296 Lorimer street, E. D.
Fessenden, B. F., 380 Adelphi street.
Fernandez, A. M., 115 Summit street.
Figueira, M., 827 Flushing avenue, E. D.
Fisk, S. N., 86 Fifth street, E. D.
Fleming, J W., 125 Fourth street, E. D.
Ford, A. W., 167 Union street.
Ford, Nathaniel, 514 Henry street.
Forrest, A. A., 119 Prospect place.
Fowler, G. R., 457 Marcy avenue.
Freeman, J. N., 80 Hanson place.
French, Thomas R., 469 Clinton avenue.
Frickenstein, T., 110 Union ave., E. D.
Fuhs, J., 221 South Fourth street, E. D.
Fuller, S. E., 79 Hanson place.
Furgang, Albert, East New York.
Gallagher, Thomas, 420 Manhattan ave., E. D.
Gilfillan, William, 98 Remsen street.
Gilfillan. William G., 79 Main street.
Gillette, F. B., 128 Calyer street, E. D.
Giroux, T. C., 142 So. Fourth st., E. D.
Gleavy, J. J., 380 Bergen street.
Goodspeed, C., 389 Union street.
Goodwin, Francis, 350 Bedford avenue.
Gray, L. C., 111 State street.
Gregory. J. E., 531 Henry street.
Grether, E., 162 McKibben street, E. D.
Griffin, J., 90 Sands street.
Griffing, G. P., 597 Lorimer st., E. D.
Griffiths, W. E., 324 Schermerhorn st.
Griggs, S. C., 141 Lefferts Place.
Gunther, C. E., 326 Clinton street.
Hallam, A. C., 518 Grand street, E. D.
Halsey, J. C., 21 Concord street.
Harcourt, J. M., 328 Clinton street.
Hardrich, H., 260 Graham avenue.
Harlin, W. H., 270 Sumner avenue.
Harrigan, J. 123 William street.
Haslett, Audley, 115 Clinton street.
Hawley, J. S., 29 Tiffany Place.
Healy, Joseph, 77 Gates avenue.
Henderson, A. C., 164 North Sixth street, E. D.
Henry, J. W., 203 Halsey street.
Hesse, H. J., 188 Bushwick avenue.
Hewett W. B., 163 Prospect place.
Hopkins G. G.,375 Grand avenue.
Horton, A. F., 189 Macon street.
Howe, J. F., 413 Fifth avenue.
Hoyt, F. M., 105 North Oxford street.
Hunt, J. H., 419 Hart street.
Hutchins, Alexander, 796 DeKalb avenue.
Hutchison, J. C., 479 Clinton avenue.
Hyde, Joel W., 215 Schermerhorn street.
Jenkins, J. A., 702 Leonard street.
Jewett, Charles, 307 Gates avenue.
Jewett, C. C., 23 Clinton street.
Johnson, C. H., 141 Greene avenue.
Johnson, J. G., 153 Joralemon street.
Joye, T. A., 89 Pacific street.
Keller, Ferd. 60 St. Mark avenue.
Kene, J. A., 31 Debevoise place.
Ketcham, G. F.. 331 Adelphi street.
King, J. S., 883 Myrtle avenue.
Kortwright. J. C., 93 Taylor street, E. D.
Krauter, J., 742 Flushing ave.
Kretzschmar, P. H., 413 Carlton avenue.
Kuhn, George H., 122 Clinton ave.
Lamadrid, J. J., 258 Franklin avenue.
La Roe, J. G., 103 Milton street.
Leary, J. B., 651 DeKalb avenue.
Leighton, N. W., 143 Taylor street, E. D.
Lester, J. C., 122 Second place.
Leuf, A. H. P., 194 Wyckoff street.
Lewis, D. C., 902 Gates avenue.
Lewis, E. A., 94 Pineapple street.
Lindridge, E. F., 157 Cumberland street.
Little, W. A., 443 Bedford avenue.
Loewenstein, H., 150 Bushwick ave. E.D.
Lowell, A. L., 30 Clinton strent.
Lucas, D. F., 600. Pacific street.
Lung, J. B., 20 Utica avenue.
McClellan, Chris. R., 119 Pacific street.
McCollom, Wm., 195 Lefferts place.
McCorkle, J. A., 264 Clinton street.
McCosker, T., 281 Ewen street.
McHatton, H., 24 South Portland ave.
McLean, H. C., 390 Dean street.
McManus, J., 181 Thirteenth street.
McNaughton, G., 194 Greene avenue.
Madden, Frank, 184 Clinton.

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Maddren, Wm.. 1 Hanson place.
Malone, Ed., 111 So. Second st., E. D.
Mann, C. S., 481 Franklin avenue.
March J. E., 10 E. Washington avenue.
Martin, W. H., 357 Clinton street.
Mason, L. D., 171 Joralemon street.
Matheson, A. R., 331 Union street.
Mathewson, A., 139 Montague street.
Mathewson, W. B., 94 Livingston street.
Matson, N., 285 Franklin avenue.
Matson, W. B., 285 Franklin avenue.
Matthews, H. C., 894 Quincy street.
Mattison, J. B., 185 Livingston street.
Mears, J,, 258 Grand avenue.
Merritt, John, 22 Lafayette avenue.
Metcalfe, E. G., 348 South Fifth st., E. D.
Meyer, Joseph, 390 Graham ave., E. D.
Meyersburg, A. G., East New York.
Miller, F. H., East New York.
Minard, E. J. Chapin, 232 Quincy street.
Mitchell, C. L., 129 Montgomery street.
Moitrier, W., 150 Bushwick avenue.
Moore, J. Fred., 444 Pacific street.
Mordough, E. F., 74 Sands street.
Morse, V., 291 Carlton avenue.
Nehrbas, Jacob, 441 Bedford avenue.
Newman, F. R., 110 Madison street.
Newman, G. W., 191 Lorimer st., E. D.
North, N. L., 108 Ross street, E. D.
Norton, H. W., 465 State street.
Olcott, Cornelius A., 104 Bedford ave., E. D.
Olmstead, S. H., 192 Union street.
Ormiston, Robert, 117 Elliott street.
Ostrander, F. W., 95 Clark street.
Ostrander, G. A., 61 Greene avenue.
Ostrander, J. W., 95 Clark street.
Otterson, Andrew, 179 Washington street.
Otterson, Wm. C., 144 Pierrepont street.
Paine, A. R., 485 Clinton avenue.
Palmer, Ernest, 155 Clinton street.
Peck, A. E., 124 Lawrence street.
Peck, E. F., 385 State street.
Pendleton, E., 112 Fourth street, E. D.
Pilcher, L. S., 4 Monroe street.
Pillsbury, Harriet F., 98 Ross street, E.D.
Pillsbury, H. H., 98 Ross street, E. D.
Plympton, H., County Hosp'l, Flatbush.
Pratt, W. H. B., 94 Sixth avenue.
Prendergast, P. J., 518 Henry street.
Prout, J. S., 167 Clinton street.
Quinn, J. R., 423 Kent avenue.
Rand, H. W., 21 Clinton street.
Randolph, W, H., 179 Herkimer street.
Rappold, J. C., 750 Flushing ave.
Raub, Joseph M., 295 Clinton street.
Ray, J. A., 166 Gates avenue.
Raymond, J. H., 173 Joralemon street.
Read, H. N., 541 Henry street.
Reese, W. W., 155 Pierrepont street.
Reimer, A. F. W., 738 Flushing ave., E. D.
Reynolds, E., 154 Lafayette avenue,
Rice, M. Louise, 323 State street.
Richardson, J. E., 125 South Oxford st.
Riedel, Henry, 179 Bushwick ave., E. D.
Risch, H. F. W., 171 Seventeenth street.
Robinson, S. C., 431 Clinton avenue.
Rochester, T. M., 2 St. James Place.
Rockwell, F. W., 6 Lafayette avenue.
Rogers, H. C., 377 Gates avenue.
Rooney, A. J., 226 Seventeenth street.
Rushmore, J. D., 129 Montague street.
Russell, W. G,, 165 South Ninth st., E. D.
Santoire, S., 148 Clinton street.
Schapps, J. C., 153 Ross street, E. D.
Schenck, P. L., 40 St. Mark's Place.
Schenck, Tennis, New Utrecht.
Schlatter, C. B., 145 Sackett street.
Schmetzer, G., 734 Flushing avenue.
Schmidt, C. F., 73 Stagg street.
Segur, B. A., 281 Henry street.
Shaw, J. C., 177 Schermerhorn street.
Sheldon, Preston, 202 Keap street, E. D.
Shepard, A. W., 126 Willoughby street.
Sherfy, J. W., 703 Fourth avenue.
Sherman, W., 338 Ninth street.
Sherwell, S., 186 Remsen street.
Sizer, N. B. de S., 336 Greene avenue.
Skene, A. J. C., 167 Clinton street.
Small, H. G., 206 South Eighth st., E. D.
Smith, E. P., 89 Division avenue, E. D.
Smith, G. K., 102 Pierrepont street.
Smith, Jos. E., 64 Marcy avenue.
Smith, W. Scott, 1047 Third avenue.
Snively, J. C., 157 Clinton street.
Soerensen, S. J,, 124 Carroll street.
Speir, S. F., 162 Montague street.
Spencer, W. E., 94 Livingston street.
Squibb, E. H., 152 Columbia Heights.
Squibb, E. R., 36 Doughty street.
Sterling, J. H., 223 Schermerhorn street.
Stone, R. H., 178 Jay street.

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Stuart, F. H., 123 Joralemon street.
Stub, Arnold, 136 Dean street.
Sullivan, J. D., 9 Decatur street.
Swalm, W. F., 118 Lafayette avenue.
Sweeny, James, 192 North Sixth st. E. D.
Swift, William, 54 Lefferts Place.
Szigethy, C. A. H., 201 Clinton street.
Terhune, J. J., 171 Adelphi street.
Terry, C. H., 540 Washington avenue.
Thallon, W. M., 816 St. Mark's avenue.
Thayer, W. H., 171 Livingston street.
Thomas, F. M., 206 Macon street.
Tittemore, Noah, 1075½ De Kalb avenue.
Turner, Henry C., 382 Court street.
Turner, J. M., 413 Henry street.
Tuthill, S. B., 430 Lewis avenue.
Valentine, J. F., 150 Noble street, E. D.
Van Brakle, James, 166 Fourth st., E. D.
Vanderveer, J. R., 301 Carlton avenue.
Van Duzee, T. A., 145 Eighth street, E. D.
Van Harlingen, J., 166 Duffield street.
Van Kleek, R. L., Gravesend.
Van Ness, John, 456 Bedford avenue.
Van Zile, B. S., 161 Willoughby street.
Wackerhagen, G., 188 State street.
Wade, James D., 252 So. Ninth st., E. D.
Wade, John E., 10 Kossuth place, E. D.
Walker, Jerome, 8 Seventh avenue.
Wallace, William, 183 Congress street.
Waterworth, W., 1153 Fulton street.
Watt, James, 384 Court street.
Wells, G. W., 379 Clinton street.
Welton, R. B., 513 Henry street.
Welty, G. W., 500 Clinton street.
West, F. E., 24 Clinton street.
Westbrook, B. F., 174 Clinton street.
Westbrook, G. R., 259 Dean street.
Whaley, E. A., 73 South Oxford street.
Wheeden, T. J., 54 Concord street.
Wheeler, E. A., 27 Bedford avenue.
White, G. R., 227 Eleventh street.
White, H. B., 96 Pineapple street.
White, J. A., 672 Lafayette avenue.
Whiting, Howard, 224 Hewes street.
Wieber, George, 181 South Fifth st., E. D.
Wight, J. S., 115 Pacific street.
Wilbur, J. G., 544 Washington avenue.
Wilde, Thomas, 35 Fifth avenue.
Williams, H. F., 63 Downing street.
Williams, M. S., 395 Sixth avenue.
Williams, W. H., 607 Third avenue.
Willis, L. A., 171 Keap street, E. D.
Wilson, Jared, 20 Verona place.
Wolff, A. J., 202 Raymond street.
Woodhull, Kate C., 223 Halsey street.
Wunderlich, F. W., 145 State street.
Wyckoff, R. M., 582 Clinton avenue.
Young, C, F., 356 Bedford avenue.
Young, J. S., 85 Johnson street.
Zabriskie, J. L., Flatbush.
Zellhoefer, C., 175 South Fourth street, E. D.

Number of Members, 357.

LEWIS COUNTY.

LEWIS COUNTY MEDICAL SOCIETY.

(Organized January 8, 1861.)

MEETINGS—Annual, fourth Tuesday in June; semi-annual, third Tuesday in December; quarterly, fourth Tuesday in March and September.

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Officers. (*June* 27, 1882.)

Alexander H. Crosby, President.
O. O. Stowell, Vice-President.
W. O. Hubbard, Secretary.
C. P. Kirley, Treasurer.

Censors.

Delegate to State Medical Society.

C. E. Douglass.

Committee on Hygiene.

A. H. Crosby, W. H. Johnson, C. E. Douglass.

Members.

Cornish, H. J., Turin.
Crane, F. A., Lowville.
Crosby, A. H., Lowville.
Douglass, Charles E, Constableville.
English, G. P., Constableville.
Faudry, David, Barnes' Corners.
Hendee, H. S,, Lowville.
Hough, F. B., Lowville,
Hubbard, W. O., Lowville.
Jamieson, W. W., New Bremen.
Johnson, Wm. H., Port Leyden.
Kirley, C. P., Lowville.
Mason, L. F., Barnes' Corners.
Merriam, C. H., Locust Grove.
Murphy, S. H., Glensdale.
Powell, William, Turin.
Shaw, Otis, Copenhagen.
Stowell, O. O., Copenhagen.
Turner, W. H. A., Denmark.

Number of Members, 19.

LIVINGSTON COUNTY.

LIVINGSTON COUNTY MEDICAL SOCIETY.

(Organized in June 1853.)

MEETINGS—Annual, second Tuesday in June, at Geneseo; semi-annual, second Tuesday in January, at the place selected by the Society; quarterly, at the call of the President.

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Officers. (*June* 13, 1882.)

J. E. Jenks, President.
F. B. Dodge, Vice-President.
W. E. Lauderdale, Jr., Secretary.
M. C. Rowland, Treasurer.

Censors.

B. T. Kneeland. J. E. Crisfield. W. E. Lauderdale, Jr.

Delegate to State Medical Society.

J. W. Gray.

Members.

Alley, Wm. B., Nunda.
Ames, L. J., Mt. Morris.
Bennett, George H., Lima.
Bissell, D. H., Geneseo.
Blake, Z. H., Dansville.
Brown, John P., Tuscarora.
Byam, L. W., Mumford.
Coe, W. C., Avon.
Craig, J. W., Geneseo.
Craig, John, Mumford.
Crisfield, J. E., Dansville.
Denton, John, Moscow.
Dodge, F. B., Mt. Morris.
Dyke, I. A. M., York.
Ellis, S. G., Lima.
Filkins, J. G., York.
Gray, J. W., Avon.
Greene, Jay L., Hemlock Lake.
Hagey, Jacob M., Mt. Morris.
Jenks, James, Avon.
Joslyn, Z. H., Mt. Morris.
Keis, E. F., Caledonia.
Kneeland, B. T., Nunda Station.
Lauderdale, W. E., Geneseo.
Lauderdale, W. E., Jr., Geneseo.
Losey, J. H., Conesus.
Menzie, R. J., Caledonia.
Moyer, F. H., Tuscarora.
Nesbit, William, Avon.
Patchin, Charles V., Dansville.
Perine, F. M., Dansville.
Purchase, J. B., Scottsburgh.
Richmond, C. H., Livonia.
Rowland, M. E., Geneseo.
Shelden, H. P., Livonia.
Woodin, I. J., Springwater.
Woodin, L. L., Springwater.

Number of Members, 37.

MADISON COUNTY.

MADISON COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in July; semi-annual, in January, at the call of the President.

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Officers, (*July* 11, 1882.)

Gilbert Birdsall, President.
E. L. Miller, Vice-President.
L. A. Van Wagner, Secretary.
Amelia Tompkins, Treasurer.

Censors. (1881.)

H. W. Carpenter, L. P. Greenwood, A. D. Head.
Wm. Taylor, C. R. Wilcox,

Delegate to State Medical Society.

A. D. Head.

Members.

Beebe, Frank D., Hamilton.
Billington, M., Chittenango.
Birdsall, Gilbert, North Brookfield.
Brown H. Clift, South Brookfield.
Burkhyte, O. W., Brookfield.
Carpenter, H. W., Oneida.
Carpenter W. M., Erieville.
Chase, D. D., Morrisville.
Chesebrough, Amos, South Brookfield.
Clarke, Silas S., DeRuyter.
Crandall, H. S., Leonardsville.
Dewey, F. E., Peterboro.
Eaton, J. R., Chittenango.
Elder, Jennie S., Canastota.
Foord, H., Cazenovia.
Furman, Charles L. Hamilton.
Goff, I. N., Cazenovia.
Gray, R. H., Oneida.
Greene, Carl D., Poolville.
Greenwood, L. P., Erieville.
Harris, George W., Georgetown.
Head, A. D., Eaton.
Huntley, J. F., Oneida.
Jarvis, Milton B., Canastota.
Mason, Venomi W., Canastota.
Maxson, Sands C., Leonardsville.
Miller, Edgar L., Eaton.
Mead, H. P., Morrisville.
Moore, S. P., Munnsville.
Munger, G. B., Perryville.
Perry, C. H., Oneida.
Putnam, John, Madison.
Ransom, Charles H., Erieville.
Rogers, Albert C., Brookfield.
Smith, A. D., Cazenovia.
Smith, J. W., Morrisville.
Spencer, Ira, DeRuyter.
Stevens, R. F., Canastota.
Taylor, Wm., Canastota.
Throop, J. Mott, Lebanon.
Tompkins, Amelia, Hamilton.
Ure, H. D., Wampsville.
Van Wagner, L. A., North Brookfield.
Warner, N. P., New Woodstock.
Wilcox, C. B., Earlville.

Number of Members, 45.

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MONROE COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF MONROE.

MEETING—Annual, last Wednesday in May.

Officers, (*May* 24, 1882.)

J. J. Kempe, President.
A. Dann, Vice-President.
P. D. Carpenter, Secretary.
C. S. Starr, Treasurer.

Censors.—(*Ex-Officiis.*)

J. J. Kempe. A. Dann. P. D. Carpenter.

Delegates to State Medical Society.

A. Mandeville. Wm. F. Sheehan. T. B. Collins.

Members.

Backus, Azel, 26 Spring street.*
Bailey, W. C., Clifton.
Ballantine, Eveline D., 24 Marshall street.
Beach, G. L, 48 South avenue.
Behan, James, 139 West avenue.
Benford, G. T., 185 North Clinton street.
Bowen, J. C., Klink, near Monroe ave.
Bradley, Hugh, 8 Sophia street.
Braman, A. N., Brockport.
Briggs, C. M., Fairport.
Briggs, Wm. H., 75 E. Main street.
Brown, F. W., 1 Elwood buildings.
Buckley, Charles, 62 E. Main street.
Burke, J. J. A., 124½ W. Main street.
Cameron, Charles McD., 50 Lake avenue.
Carpenter, A. B., Greece.
Carpenter, A. M., Greece.
Carpenter, D., Brockport.
Carpenter, P. D., Pittsford.
Carroll, George G., 8 Sophia street.
Casey, J. W., 15 Sophia street.
Clarke, Elias A., 128 State street.
Collins, T. B., 74 E. Main street.
Cowles, J. B., Fairport.
Craig, J. W., Churchville.
Curtis, D. F., 44 South avenue.
Daly, Thomas, 70 South Union street.
Darrow, C. E., 74 East avenue.
Dann, A., 157 East Main street.
Davison, S. W., 110 State street.
DeVinney, C. L., 77 Monroe avenue.
Dewey, C. A., 67 Fitzhugh street.
Dolly, C. S., 30 East avenue.
Dolly, Sarah R. A., 30 East avenue.
Dunning, J. D., Webster.
Durand, T. B. V., Fairport.
Eaves, William, 9 Franklin street.
Edson, F., Scottsville.
Ely, W. B., Brighton.
Ely, W. S., 67 Fitzhugh street.
Farley, Porter, 62 Fitzhugh street.
Fenno, H. M., 104½ Plymouth avenue.
Forbes, Charles, 18 Fremont street.
Fuller, W. S., Fairport.
Gallery, F. B., 256 State street.
Gandy, L. T., Chili.
Gilkeson, B. F., 55 State street.
Hamilton, Frank, F., 3 New York street.
Hayes, Robert T., 36 Clifton street.
Herriman, W. J., ———.

*Where no town is mentioned, Rochester is to be understood.

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Hill, J. H., Brockport.
Hillman, L. L. F., Greece.
Holman, S. A., North Parma.
Hovey, B. L., 35 Fitzhugh street.
Howard, Edward, Churchville.
Howard, E. H., 3 Clarissa street.
Howard, W. B., 56 University avenue.
Howe, W. J., Scottsville.
Jones, Frank A., Charlotte.
Jones, Jonas, 116 West avenue.
Kempe, J. J., 11 Grove street.
Kinchling, L., 76 North Clinton street.
Knowlton, Myron, 56 North St. Paul st.
Koch, Henry, 75 North Clinton street.
Lacy, W. G., Scottsville.
Lakeman, W. H., 301 State street.
Laugworthy, H. H., 79 State street.
Little David, 82 Plymouth avenue.
Lord, M. L., Insane Asylum, Rochester.
Lung, Julius C., 7½ North Washington st.
Mallory, M. L., 33 Fitzhugh street.
Mandeville, A., 62 East Main street.
Mandeville, F. A., 62 East Main street.
Mann W. B., Brockport.
Mason, D. G., East Henrietta.
McKelvey, C. E., 57 State street.
Monroe, J. S., 158 East Main street.
Montgomery, H. F., 44 Spring street.
Moore, E. M., 63 South Fitzhugh street.
Moore, E. M., Jr., 63 South Fitzhugh st.
Moore, Richard Mott, 63 S. Fitzhugh st.
Morse, H. A., Clarkson.
O'Hare, T, H., 125½ State street.
Olin, E. S., 8 East Main street.
Padiera, G. W. H., 120 State street.
Palmer, Minerva, 32 Rome street.
Parmelee, L. A., Penfield.
Pease, Joseph, Hamlin.
Pierce, S. A., 24 East Main street.
Pond, J. D., 136 State street.
Preston, B. I., 1 James street.
Preston, C. E., Penfield.
Preston, E. S., 16 Chestnut street.
Reynolds, R. C., Pittsford.
Rider, C. E., 60 Fitzhugh street.
Rockwell, A. S., 48 Powers Block.
Roe, J. O., 17 North Clinton street.
Rogers, Obadiah, Brockport.
Schuhart, Q. C., 128 St. Joseph street.
Searing, Anna H., 30 East avenue.
Sheehan, W. F., 45 Lake avenue.
Sherman, H. B., 135 East Main street.
Sherwood, F. G., Rush.
Shipman, D. M., 29 Fitzhugh street.
Slayton, W. C., Spencerport.
Southworth, J. W., 21 Smith's block.
Stafford, John, 1 Whalin street.
Starkey, D., Chili.
Starr, C. S., 15 East avenue.
Stoddard, E. V., 26 South Washington st.
Udell, P. D., Spencerport.
Wallace, G. A., 18 North Clinton street.
Watkins, Francis B., 23 East avenue.
Webb, Wm. H., 27 Asylum street.
Weigel, L. A., 69 North Clinton street.
Whitbeck, J. W., 123 East avenue.
Whitcomb, E. E., 96½ East Main street.
Wilbor C. W., 187 North Clinton street.
Williams, H. T., 125 East avenue.
Wood, G. A., Scottsville.
Wooden, C. D., 347 State street.
Woodruff, Lettie H., 111 Plymouth ave.

Number of Members, 122.

MONTGOMERY COUNTY.

MONTGOMERY COUNTY MEDICAL SOCIETY.

(Organized July, 1806.)

MEETINGS—Annual, second Wednesday in June; quarterly, second Wednesday in September, December, and March; all at Fonda.

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Officers, (*June* 14, 1882.)

S. H. French, President.
Wm. H. Biggam, Vice-President.
Wm. J. Peddie, Secretary and Treasurer.

Delegate to State Medical Society.

F. G. Buckbee.

Members.

Ayers, Alexander, Fort Plain.
Ayers, Douglas, Fort Plain.
Biggam, Wm. H., Charleston.
Biggam, Wm. H., Jr., Fort Plain.
Buckbee, I. I., Fonda.
Buckbee, F. G., Fonda.
Burton, Thompson, Fultonville.
Cornell, F. O., Port Jackson.
Fairbanks, C. A., Amsterdam.
French, S. H., Amsterdam.
Graves, Ezra, Amsterdam.
Heligas, William, Hagaman's Mills.
Klock, C. M., St. Johnsville.
Leach, H. M. Glen.
Lewis, S. D., Amsterdam.
McMartin, Daniel M., Amsterdam.
Nellis, Alex., Jr., Port Jackson.
Parr, John, Buell.
Peddie, Wm. J., Fultonville.
Potter, Darwin, Fort Plain.
Putnam, A., Amsterdam.
Robb, Wm. H., Amsterdam.
Rulison, E. T., Amsterdam.
St. George. Lewis, Canajoharie.
Simons, F. E. Canajoharie.
Smealey, J. A.. Canajoharie.
Smyth, A. V. H., Minaville.
Snell, J. G., Amsterdam.
Snyder, Morgan, Fort Plain.
Stafford, O. J., Canajoharie.
Stover, Charles, Amsterdam.
Suits, Peter L., Tribe's Hill.
Taylor, D. M., Canajoharie.
Vedder, Christian, St. Johnsville.
Wessels, S. A., Canajoharie.
White, Joseph, Canajoharie.

Number of Members, 36.

NEW YORK COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

MEETINGS.—Annual, fourth Monday in October; stated meetings, the fourth Monday in each month, (June and August excepted), at the College of Physicians and Surgeons, corner of Fourth avenue and Twenty-third street.

Officers. (*October* 24, 1881.)

F. R. Sturgis, President.
W. Gill Wylie, Vice-President.
Wesley M. Carpenter, Secretary.
P. Brynberg Porter, Assistant Secretary.
Orlando B. Douglas, Treasurer.

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Censors.

E. B. Bronson, Daniel Lewis, David Webster,
A. Jacobi, E. F. Ward.

Delegates to State Medical Society.

F. H. Bosworth, L. D. Bulkley, C. S. Bull,
W. M. Carpenter, G. H. Fox, V. P. Gibney,
W. R. Gillette, A. McL. Hamilton, H. T. Hanks,
E. G. Janeway, L. Johnson, A. B. Judson,
D. Lewis, A. V. B. Lockrow, W. T. Lusk.
C. W. Pickard, E. H. M. Sell, A. C. Post,
B. Robinson, S. Sexton, F. R. Sturgis,
R. W. Taylor, J. S. Warren, D. Webster.

Committee on Hygiene.

John C. Peters, E. G. Janeway, C. E. Billington, D. B. St. John Roosa
A. B. Judson.

Members.

Abbe, Robert, 32 East 20th street.*
Abbott, Frank, 22 West 40th street.
Acheson, John C., 84 Orchard street.
Ackerman W. P., Park Avenue Hotel.
Adam, Clovis, 106 East 23d street.
Adams, J. G., 12 West 31st street.
Adler, Isaac, 744 Lexington avenue.
Agan, David H., 363 Broome street.
Agnew, C. R., 266 Madison avenue.
Aitkin, John S., 357 West 30th street.
Alexander, W. T., 1084 Lexington ave.
Allen, Thomas H., 69 Madison avenue.
Alsdorf, John 201 West 42d street.
Anderson, H. A. C., 175 East 85th street.
Anderson, James, 30 University place.
Anderson, James H., 30 University place.
Antonini, A. D., 36 West 15th street.
Armstrong, O. W., 125 West 34th street.
Arnold, E. A., 38 West 48th street.
Arnold, G. C., 115 East 30th street.
Arnold, J. W. S., 410 East 26th street.
Asch, Morris J., 23 West 30th street.
Assenheimer, Augustus, 323 51st street.
Assenheimer, Henry, 333 East 32d street.
Avery, Charles H., 337 East 18th street.
Bacon, Gorham, 63 West 54th street.
Bahan, Thomas S., 235 West 14th street.
Baker, Mercy N., 303 East 18th street.
Ball, A. B., 42 West 36th street.
Balser, Henry, Jr., 606 East Ninth street.
Balser, Wm., 218 East 13th street.
Bang, Richard Theo., 31 Greenwich ave.
Bangs, L. Bolton, 127 East 34th street.
Banks, Elbert A., 12 East 28th street.
Banks, James L., 79 Fifth avenue.
Baranowitz, Julius, 232 East 30th street.
Barker, Fordyce, 24 East 38th street.
Barron, John C., 17 East Washington pl.
Baruch, Simon, 144 West 43d street.
Bates, Erskine S., 161 East 31st street.
Beach, Wooster, 105 East 89th street.
Beard, George M., 52 West 34th street.
Beckwith, F. E., 571 Lexington ave.
Bedford, Frederick, 66 Fifth avenue.
Beekman, John N., 18 East 20th street.
Bennett, F. B., 94 Suffolk street.
Bentz, George K., 91 East 3d street.
Bermingham, E. J., 1260 Broadway.
Berry, John J., 135 East 42d street.
Bigelow, George W.

*Where no town is mentioned, New York is to be understood.

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Billings, John H., 399 Livingston ave.
Billington, C. E., 110 Madison avenue.
Birdsall, William R., 144 East 74th st.
Black, Carrie L., 58 East 55th street.
Blackwell, Emily, 53 East 20th street.
Blakeman, William N., 28 West 37th st.
Blauvelt, A., 338 West 12th street.
Bleything, George D., 135 East 78th st.
Bliss, Charles, 235 West 51st street.
Blumenthal, Mark, 58 West 42d street.
Bogert, S. S., 23 Second street.
Boldt, Herrmann J., 355 West 42d st.
Bopp, Ludwig, 39 East 7th street.
Born, Rudolph O., 131 West 34th st.
Bosworth, Franche H., 26 West 46th st.
Bosley, George H., 229 West 52d st.
Bostwick, Homer, River Lodge, East 75th street.
Bourke, Geoffrey R., 126 West Washington place.
Bowden, James W., 319 Second avenue.
Bozeman, Nathan, 296 Fifth avenue.
Bracker, Max, 70 Second avenue.
Bradley, Edward, 11 West 30th street.
Bradshaw, Laban L., 164 East 74th st.
Brailly, Alfred V., 225 West 40th street.
Brailly, Cosmo, 31 West 32d street.
Brandeis, Richard C.. 32 West 33d st.
Brandis, Adolph C., 29 Market st.
Brandis, Herman M., 31 City Hall pl.
Branth, John H., 434 West 51st st.
Breakell, James A., 335 West 24th st.
Brekes, David, 259 East 10th street.
Brennan, John W., 143 Lexington ave.
Briddon, Charles K., 67 West 23d street.
Brockway, A. N., 44 East 126th street.
Bronson, Edward B., 123 West 34th st.
Brown, Charles H., 62 West 19th street.
Brown, Edwin P., 1052 Second avenue.
Bruce, Charles E., 218 East 35th street.
Bryant, Joseph D., 68 West 35th street.
Buchanan, Alex., 355 West 30th street.
Buchler, Augustus F., 380 West 32d st.
Buchler, Charles W., 380 West 32d st.
Buck, Albert H., 109 Madison avenue.
Buck, Francis D., 43 West 29th street.
Bulkley, Lucius D., 1 East 33d street.
Bull, Charles S., 47 East 23d street.
Bull, George W., 49 East 61st street.
Bull, Wm., 2 East 33d street.
Bullard, Wm. E., 46 East 30th street.
Bullard, Wm. M., 302 Madison avenue.
Burch T. Hamilton, 19 West 42d street.
Burchard, Thomas H., 24 West 40th st.
Burke Michael J., 164 Hester street.
Burr, Buchanan, 174 West 58th street.
Burrall, Fred. A., 48 West 17th street.
Burrian, J. J., 217 East 10th street.
Burt, Stephen S., Park Avenue Hotel.
Busche, Thos. W., 108 Rivington street.
Butler George H., 42 East 66th street.
Buttles, Marvin S., 20 East 28th street.
Byrne, James Peter, 158 East 26th st.
Caille, Aug. G., 308 Broome st.
Caldwell, R. A., 50 West 34th street.
Callan, Peter A., 159 West 34th street.
Cameron, Edward M., 47 West 26th st.
Campbell, Gawn, 422 West 44th street.
Campbell, John L., 229 West 42d street.
Campbell, Robert, 422 West 34th street.
Cardner, Iretus G., 110 Lexington ave.
Carey, George F., 210 East 17th street.
Carman, A. R., 104 East 127th street.
Carpenter, Wesley M., 123 East 25th st.
Carr, David C., 73 West 126th street.
Carradine, James S., 58 West 19th st.
Carreau, J. S., 38 West 12th street.
Carter, H. Skelton, 126 East 24th street.
Castle, Fred. A., 102 East 57th street.
Chadsey, Alonzo J., 170 Spring street.
Chalmers, Thomas C., 25 West 17th st.
Chamberlain, Geo. W., 153 East 39th st.
Chamberlain, William M., 68 W. 49th st.
Chambers, Porter F., 596 Lexington av.
Chapin, Frank W., Riverside Hospital.
Chauveau, J. F., 6 Ludlow place.
Cheesman, Hobart, 244 West 56th st.
Cheesman, T. M., 17 West 18th street.
Chrystie, Thos. M. L., 100 West 53d st.
Church, Allen S., 238 West 45th st.
Cisneros, Juan, 311 West 33d street.
Clark, David B., 165 West 34th street.
Clark, John Seymour, ——— ——.
Clark, Stephen J., 145 West 12th street.
Clements, James W. G., 64 West 56th st.
Cleveland, Glement, 59 West 38th street.
Clymer, Meredith, 65 West 38th street.
Coan, T. Munson, 110 East 56th street.
Cock, Thomas F., 14 East 40th street.
Cole, Palmer C., 254 West 42d street.
Comfort, J. H., 255 West 20th street.
Comstock, David C., 83 Lexington ave.

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Conover, Williams S., 149 Levington av.
Conrad, Harry B., 53 Lexington ave.
Conrad, Lewis, 43 East 19th street.
Coon, Sarah A., 219 East 118th street.
Cooper, Henry C., 410 East 26th street.
Cosby, John B., 310 West 48th street.
Cosine, Garrett, 52 East 128th street.
Coughlin, Jeremiah, 205 Henry street.
Crampton, Henry E., 221 Second ave.
Crane, John J., 31 West 21st street.
Crane, Joseph S., 41 West 45th street.
Cranmer. Charles C., Union Sq. Hotel.
Cremin, P. W., 846 Lexington ave.
Cross, Thad. M. B., —— ——.
Currier, Andrew Fay, 129 West 42d st.
Curtis, Edward, 27 Washington place.
Curtis, John G., 127 East 35th street.
Cushier, Elizabeth M., 5 Livingston pl.
Cushman, Joseph, 213 East 48th street.
Cushman, Wm. F., 325 West 22d street.
Cypert, John R., 656 Lexington ave.
Dalrymple, Aaron P., 337 West 35th st.
Dalton, John C., 43 West 48th street.
Damainville, L., 245 West 52d street.
Dana, Alfred S., 69 W. Washington pl.
Dana, Charles L., 62 West 46th street.
Dana, Samuel W., 50 West 28th street.
Dastler, Francis, 368 West 46th street.
Davis, Albert A., 119 East 62d street.
Dawson, Benjamin F., 8 East 15th st.
Day, W. DeF., 56 East 34th street.
De Garmo, Wm. B., 255 West 24th st.
De Luna, A. B., 368 West 32d street.
De Wolfe, Stephen, 138 West 34th st.
Delafield, Francis, 12 West 32d street.
Delavan, D. Bryson, 59 West 38th st.
Denison, Ellery, 124 West 13th street.
Dennis, Fred. S., 21 East 21st street.
Denslow, LeGrand N., 51 West 33d st.
Derby, Richard H., 9 West 35th st.
Dessau, S. Henry, 75 West 55th street.
Detmold, William, 38 East 9th street.
Dexter, B. F., 130 West 43d street.
Dew, J. Harvie, 263 West 54th street.
Dieffenbach, Richard G. L., 224 East 48th street.
Dixon, Geo. Arthur, 47 East 25th st.
Doepfner, Julius, 657 Lexington ave.
Donlin, Philip E., 129 West Houston st.
Donnelly, M., 354 West 30th street.
Doran, John, 206 East 82d street.
Dorn, John H., 175 Bleecker street.
Douglas, J. H., 48 East 26th street.
Douglas, Orlando B., 123 East 36th st.
Draper, William H., 4 East 37th st.
DuBerceau, Arthur, 238 West 25th st.
Dubois, Abram, 16 West 30th st.
Dubois, Coert, 599 Lexington avenue.
Dubois, Matthew B., 539 Livingston ave.
Dumond, C. J., 358 West 42d street.
Dunphy, John F., 194 Second avenue.
Dunton, Milo M., 37 Seventh street.
Durant, Ghislani, 46 West 32d street.
Dwinelle, W. H., 27 West 34th street.
Dwyer, John, 180 East 111th street.
Early, Maurice B., 84 Macdougal street.
Edebohs, George W., 51 Seventh street.
Edel, Carl, 386 Broome street.
Eden, John H., Fordham, N. Y.
Eisler, Morris, 222 East 13th street.
Eliot, Ellsworth, 48 West 36th street.
Elliot, Frederic, 208 West 34th street.
Elliott, H. T., 505 Hudson street.
Ellison, C. Ruxton, 215 East 112th st.
Elsberg, Louis, 614 Fifth avenue.
Ely, Edward T., 20 East 30th street.
Emerson, J. H., 81 Madison avenue.
Emmet, Bache McE., 18 East 30th st.
Emmet, Thomas A., 89 Madison ave.
Eno, Henry C., 58 East 25th street.
Evans, George A., 60 Morton street.
Ewing, W. A., 205 West 26th street.
Fairbrother, C. M., 214 East 79th street.
Farnham, Horace P., 36 West 40th st.
Farries, Robert, 223 East 79th street.
Farrington, Joseph O., 1991 Madison ave.
Farrington, Wm. H., Astor House.
Farwell, Gertrude A., 288 East 13th st.
Feeney, Michael B., 248 Mott street.
Feigenblatt, L., 232 Seventh street.
Feinberg, Schema, 183 East 79th street
Ferdinand, John E., 230 West 125th st.
Ferguson, James F., 113 East 31st st.
Ferrer, Jose M., 214 East 50th street.
Fetter, David F., 262 West 34th street.
Field, Matthew E., 14 West 28th street.
Finnell, Thomas C., 132 W. Houston st.
Fischer, Chas. Sebastian, Jr., 310 West 29th street.
Fischer, Frederick L., 97 Allen street.
Fisher, Lewis, 14 West 29th street.
Fitch, Thomas S. P., 255 West 23d st.

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Fleming, Martin J., 134 Lexington ave.
Fleming, Walter M., 57 West 45th st.
Flies, Emil, 570 Lexington avenue.
Flinn, Thomas W. P., 137 East 28th st.
Flint, Austin, 418 Fifth avenue.
Flint, Austin, Jr., 14 West 33d street.
Flint, Wm. H., 161 East 34th street.
Fluhrer, Wm. F., 60 West 50th street.
Flynn, James W., 246 East 74th street.
Ford, James C., 233 East 104th street.
Ford, Thomas J. I., 452 West 51st st.
Foster, Frank P., 32 East 31st street.
Foster, Joel, 265 Fourth avenue.
Foster, Simeon A., 218 East 39th street.
Fowler, George B., 11 West 45th street.
Fox, George H., 18 East 31st st.
Frankel, Edward, 217 East 17th st.
Frankl, J. Wilhelm, 214 East 60th st.
Frauenstein, Gustav, 359 West 15th st.
Frazer, John G., 321 West 35th st.
Freeman, A. M., 222 East 87th st.
French, Anne D., 339 West 34th st.
Friedman, Alfred, 170 East 94th st.
Friedrich, James, 322½ East 50th st.
Froehlich, David, 221 East 48th st.
Frothingham, Wm., St. Nicholas avenue corner 157 st.
Fruitnight, J. Henry, 259 West 54th st.
Fuller, Robert M., 136 West 42d st.
Gage, Reuel S., 400 West 22d st.
Garrigues, Henry J., 137 West 22d st.
Garrish, John P., 417 West 23d st.
Gay, Harvey S., 49 West 12th st.
Gerster, Arpad G., 42 Stuyvesant st.
Gibney, Virgil P., 135 East 42d st.
Gibson, Robert P., 1244 Broadway.
Gillette, Walter R., 149 West 48d st.
Gilliam, William C., 353 Fifth avenue.
Gleitsmann, Jos. W., 58 Rivington st.
Glover, John J., 40 East 63d st.
Gluck, Samuel, 163 East 60th st.
Goelet, A. H., 203 West 52d st.
Goertz, Wolfgang, 223 First avenue.
Goldberg, P. F., 166 East 74th st.
Golding, J. Fred., 274 West 11th st.
Goldman, Henry, 317 East 52d st
Goldschmeidt, L., 13 Chatham st.
Goldthwaite, Henry, Fifth Avenue Hotel.
Gomez, Horatio, 30 West 59th st.
Goodwillie, D. H., 160 West 34th st.
Gorton, Orren A., 33 East 9th st.
Gouley, John W. S., 311 Madison avenue.
Grandin, Egbert H., 215 East 79th st.
Grant, Gabriel, 22 East 30th st.
Green, John V. B., 73 West 12th st.
Greene, John W., 22 East 35th st.
Greenough, Charles H., 337 East 58th st.
Griswold, Gaspar, 251 Madison avenue.
Griswold, Henry, 356 West 30th st.
Gruening, Emil, 109 East 23d st.
Guden, William, 307 East 10th st.
Guleke, Herman F., 55 West 35th st.
Gunning, Joseph H., 24 East 65th st.
Gutmann, Edward, 120 East 58th st.
Haase, Charles F. W., 245 East 13th st.
Habirshaw, John, 137 East 46th st.
Hackley, Charles E., 63 West 36th st.
Hadden, Alexander, 155 East 51st st.
Hall, Edwards, 17 East 66th street.
Hall, Wm. H., 129 East 54th street.
Halsted, Geo. Stewart, 47 East 25th st.
Hamilton, Allan McL., 43 East 33d st.
Hamilton, Frank H., 43 West 32d st.
Hammond, Wm. A., 43 West 54th st.
Handerson, Henry E., 784 Lexington ave.
Hanks, Horace T., 55 East 59th street.
Hardy, William L., 336 West 27th st.
Harris, Elisha, 65 Bible House, Astor pl.
Harrison, George T., 221 West 23d st.
Hart, George, 59 West 35th st.
Harwood, Edward C., 44 West 49th st.
Hassloch, Wm. 220 East 49th street.
Hawes, Walker A., 221 East 62d street.
Haynes, W. H., 116 Columbia street.
Healy, James R., Hart's Island.
Healy, Thomas F., 333 West 23d st.
Heath, Allen S., 945 Lexington ave.
Hedges, David A., 26 West 46th st.
Heitzman, Charles, 37 West 45th st.
Henna, J. Julio, 112 East 24th st.
Henriques, A. J., 114 West 49th st.
Henry, M. H., 427 Fifth avenue.
Henschel, Edward K., 126 West 42d st.
Heppenheimer, Fred. C., 740 Lexington avenue.
Herrmann, August, 341 East 49th st.
Herrick, Everett, 126 Madison ave.
Hickok, George B., 123 East 10th st.
Hills, John M., 438 Madison avenue.
Hilton, Joseph, 178 Henry street.
Hinton, John H., 41 West 32d street.
Hitchcock, Charles, 61 West 36th st.

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Hitchcock, Urban G., 51 West 29th st.
Hoag, Pierre C., 46 East 30th street.
Hochheimer, Emil, 207 East 57th st.
Hodgman, Abbott, 141 East 38th st.
Hoeber, Emil W., 365 West 32d street.
Hoffman, Julius L., 80 Seventh street.
Hogan, Michael, 119 East 12th street.
Holgate, Thomas H., 149 West 14th st.
Holmes, George W., 367 Broome st.
Holmes, John F., 165th st. (Morrisania.)
Hope, George B., 13 Park avenue.
Horton, Lewis S., 140 West 23d street.
Howe, James S., 470 West 22d street.
Howe, Jos. W., 38 West 24th street.
Howland, Henry H., 106 West 34th st.
Hubbard, S. T., 27 West 9th street.
Hubbard, William B., 38 East 29th st.
Hudson, E. Darwin, Jr., 227 West 22d st.
Hugart, Alexander, 354 West 42d st.
Hull, Jos. J., 158 West 34th street.
Humphreys, Geo. H., 23 East 47th st.
Hund, F. J., 34 New Chambers street.
Hunter, S. A., 32 East 29th street.
Hunter, James B., 2 East 33d street.
Hunter, Wm. C., 255 Sixth avenue.
Hupfeld, J. W., 143d st., cor. Willis ave.
Hurdsfield, John, 261 West 38th st.
Hustace, Francis, 413 Madison avenue.
Husted, Jarvis N., 186 East Broadway.
Husted, N. C., 361 West 42d st.
Hutton, Allen C., 47 East 9th st.
Hyde, Fred. E., 20 West 58d st.
Imperatori, Carlo, 505 Pearl st.
Isham, John B., 44 West 24th st.
Ives, Francis J., 400 West 57th st.
Jackson, Geo. F., 482 West 153d st.
Jackson, G. T., 138 East 26th st.
Jackson, Wm. H., 56 West 23d st.
Jackson, W. W., Willis ave. cor. 139th st.
Jacobi, Abraham, 110 West 34th st.
Jacobi, Mary Putnam, 110 West 34th st.
Jacobus, A. M., 212 West 53d st.
Jacoby, George W., 35 West 52d st.
Janes, Edward H., 208 West 42d st.
Janeway, Ed. G., 51 East 25th st.
Janvrin, Jos. E., 191 Madison avenue.
Jarvis, Wm. C., 123 East 25th st.
Jay, John C., Jr., 17 West 46th st.
Johnson, Laurence, 323 West 27th st.
Johnson, Woolsey, 230 West 43d st.
Johnston, George W., 70 Rivington st.
Jones, Israel C., Fordham.
Jones, S. B., 594 Fifth avenue.
Jones, S. Seabury, 809 Lexington avenue.
Jones, Wm. W., 51 West 28th st.
Joy, Henry DeW., 38 Union square.
Joyce, Robert A., Washington avenue, near Fitch st., Tremont, N. Y.
Joyce, T. F., 211 East 31st st.
Judson, A. B., 129 East 17th st.
Judson, Edward A., 473 Hudson st.
Kalish, Richard, 32 East 33d st.
Kane, H. H., Fort Washington.
Kantrovitz, Adolph, 118 Rivington st.
Katzenbach, W. H., 72 West 45th st.
Keeney, Burtis M., 53 Seventh avenue.
Kellogg, John M., 543 Fifth avenue.
Kellogg, Theodore H., 29 West 36th st.
Kelsey, Charles B., 25 Madison avenue.
Kemp, William M., 267 West 23d st.
Kennedy, James, 417 West 51st st.
Kennedy, John T., 107 East 29th st.
Kessler, Adolph, 644 Lexington avenue.
Keune, Theodore, 224 East 119th st.
Keyes, Edward L., 1 Park avenue.
Kinch, Chas. A., 256 West 54th street.
King, D. F., 239 East 52d street.
Kinnicutt, Frank P., 42 West 37th st.
Kip, Isaac L., 448 Fifth avenue.
Kitchen, J. M. W., 168 West 58th street.
Klotz, Hermann G., 222 East 19th st.
Knapp, Herman, 25 West 24th street.
Knapp, John Beach, 103 West 45th st.
Knight, Charles H., 121 West 34th st.
Knight, James, 135 East 42d street.
Koehler, August, 309 East 19th street.
Krehbiel, Augustus, 64 Seventh street.
Kreizer, Charles P., 243 West 34th st.
Kremer, Carl F., 94 Second avenue.
Krog, Carl A. T., 328 East 4th street.
Krollpfeiffer, Henry, 77 Seventh street.
Kudlich, Herman F., 137 West 10th st.
Lahey, S. J., 7 Prince street.
Laight, Charles, in Europe.
Lambert, Edward W., 2 East 37th st.
Lange, Fred, 22 East 41st street.
Langmann, Gustav, 151 West 43d st.
Latham, James R., 165 West 11th st.
Lawrence, Jonathan S., 56 West 35th st.
Lawrence, Joseph B., 29 East 125th st.
Lawson, F. B., 63 West 38th street.
Lay, J. C., Vanderbilt Hotel.

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Leale, Charles A., 745 Fifth avenue.
Leaming, James R., 160 West 23d st.
Leavitt, D. F., 149 East 51st street.
Lee, Charles C., 79 Madison avenue.
Lees, Thomas McC., 53 West 26th st.
Lefferts, George M., 6 West 33d street.
Leggett, Ellen C., 354 West 23d street.
Leo, S. N., 103 West 55th street.
Leveridge, John H., 227 Henry street.
Levings, Noah C., 45 West 9th street.
Lewis, Daniel, 147 East 45th street.
Liautard, Alex. F., 141 West 54th st.
Liebenau, Charles, Morrisania.
Liebenau, Charles, Jr., Morrisania.
Limpert, Ludwig G., 257 West 38th st.
Lincoln, Rufus P., 22 West 31st st.
Lindsay, Wm. F., 139 West 41st st.
Linsly, Jared, 22 Lafayette place.
Little, James L., 60 West 40th street.
Livermore, Frank, 301 Mott street.
Livingston, W. C., 357 West 30th st.
Lockrow, Arthur V. B., 709 Madison ave.
Lockwood, C. E., 66 West 36th st.
Logue, Daniel C., 225 West 34th st.
Long, Lawson A., 52 West 24th st.
Loomis, Alfred L., 31 West 34th st.
Lordly, J. E. M., 254 West 38th st.
Loring, Celestia A., 103 West 38th st.
Loring, E. G., 128 Madison avenue.
Loughlin, Thomas J., 101 East 23d st.
Low, James Henry, 101 East 65th st.
Lowenthal, Herman, 239 East 30th st.
Lusk, Wm. T., 47 East 34th st.
Lutkens, Octavio A., 139 Attorney st.
Lyon, E. K., 312 Second avenue.
Lyons, Frederick A., 244 West 49th st.
Lyttle, Herbert G., 384 Broome st.
McBride, Thomas A., 47 East 25th st.
McBurney, Charles, 40 West 36th st.
McChesney, Jacob N, 41 West 9th st.
McCready, Benj. W., 43 East 23d st.
McCreery, John A., 356 Lexington ave.
McDonnell, Patrick W., 148 East 44th st.
McGay, R. J., 160 West 34th st.
McIntyre, B. C., 229 West 4th st.
McKay, R. J., 107 West 22d st.
McLaury, Wm. M., 344 West 42d st.
McLean, Malcolm, 304 East 120th st.
McMaster, N. G., 322 East 15th st.
McNeilly, Robt., 313 West 19th st.
McNulty. J. J., 25 Abingdon square.
McNutt, Sarah J., 238 East 13th st.
McQuesten, C. B., 784 Lexington ave.
McSweeney, Daniel E., 129 East 29th st.
Macdonald, A. E., N. Y. Asylum for Insane, Ward's Island.
Macgregor, James R., 153 East 83d st.
Mackenzie, Colin, 121 West 34th st.
Maclennan, K. F., 126 West 22d st.
Magie, David, 32 West 48th st.
Manley, Thomas H., 302 West 53d.
Markoe, T. M., 20 West 30th st.
Marsh, Edward T. T., 111 Madison ave.
Martinez, Justo P., 246 East 27th st.
Mason, R. Osgood, 64 West 20th st.
Matthews, David, 206 West 15th st.
Maxwell, E. A., 207 East 50th st.
Maxwell, Wm. H., 28 East 38th st.
Mayer, Abraham, 245 East 48th st.
Mayer, Emil, 84 Second avenue.
Mendelson, Walter, in Europe.
Messemer, E. J., 144 Second avenue.
Messemer, M. J., 144 Second avenue.
Messenger, John, 75 West 47th st.
Metcalfe, John T., 18 West 30th st.
Meylert, Asa P., 50 East 125th st.
Milhau, John J., 41 Lafayette place.
Miller, Thomas S. P., 118 West 26th st.
Milne, Charles, 124 East 45th st.
Minor, James L., 233 Madison avenue.
Mitchell, Geo. H., 139 East 17th street.
Mitchels, James, 212 East 52d street.
Mittendorf, Wm. F., 123 East 25th st.
Moeller, Henry, 240 West 68th street.
Mohn, Charles F., 55 East 4th street.
Mollenhauer, Richard, 309 East 19th st.
Molony, Augustus A., 262 West 42d st.
Monell, Jos. A., 236 West 22d street.
Monory, Leon O., 144 East 14th street.
Moore, William O., 133 East 138th st.
Moorhead, James, 256 East 83d street.
Moorhead, Joseph, 301 East 19th st.
Morrill, J. L., 201 East 72d street.
Morris, Geo. F., 284 West 4th street.
Morris, Robert S., 146 East 71st street.
Morris, S. F., 168 Lexington avenue.
Morrow, P. Albert, 13 East 41st street.
Morse, Wm. H., 153 East 77th street.
Morton, Jeremiah C., 266 West 34th st.
Morton, W. J., 15 East 45th street.
Moseley, N. R., 53 West 36th street.
Moser, G. J., 369 East 10th street.

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Mott, J. Varnum, 6 East 126th street.
Mourraille, Gustave, 74 West 12th st.
Mullen, T. P., 208 East 72d street.
Müller, Richard W., 20 Second street.
Murray, Robert A., 235 West 23d street.
Mundé, Paul F., 20 West 45th street.
Nagle, John T., 19 West 12th street.
Nammack, Chas. E., 29 Rutgers street.
Naylor, Wm. Hamilton, 248 West 44th st.
Needham, Geo. G., 218 East 19th st.
Neftel, Wm. B., 16 East 48th street.
Neil, James, 1712 Madison avenue.
Nelson, J. DeWitt, 332 West 16th st.
Newcomb, Albert S., 139 West 42d st.
Newcomb, Gilbert L., 66 Lexington ave.
Newman, Robert, 68 West 35th street.
Newman, Wm., 296 East Broadway.
Nichols, Chas. H., Bloomingdale Asylum.
Nichols, Truman, 267 East Broadway.
Nicoll, Henry D., 7 West 39th street.
Noble, John G., 258 West 25th street.
Noeggerath, Emil, 42 West 35th street.
Nordeman, Felix, 210 East 60th street.
Noyes, Henry D., 233 Madison ave.
O'Donnell, Wm., 367 East 123d street.
O'Dwyer, Joseph, 858 Lexington ave.
O'Reilly, James, 303 West 42d street.
O'Sullivan, R. J., 179 East 70th street.
Oberndorfer, Isidor P., 958 Lexington avenue.
Oppenheimer, H. S., 189 Second ave.
Otis, Fessenden F., 108 West 34th st.
Packard, Charles W., 937 Fourth ave.
Page, R. C. M., 31 West 33d street.
Pallen, Montrose A., 118 Madison ave.
Pardee, Charles Inslee, 10 West 29th st.
Pardee, Edward L., 72 West 35th st.
Parker, Willard, 41 East 12th street.
Parsons, John, Kingsbridge, N. Y.
Parsons, Ralph L., 45 East 23d street.
Parsons, Stoyell C., 206 Henry street.
Partridge, Edward L., 13 West 9th st.
Passmore, Edward C., 226 East 49th st.
Peabody, George L., 57 West 38th st.
Peaslee, Edward H., 29 Madison ave.
Peck, Edward Sprague, 53 West 50th st.
Percy, Samuel R., 47 West 38th st.
Perry, Alexander, 136 West 44th st.
Perry, John G., 113 Madison avenue.
Peters, George A., 12 West 29th st.
Peters, John C., 83 Madison avenue.
Petzold, Edward, 237 East 53d street.
Phillips, James, 248 West 54th st.
Piffard, Henry G., 10 West 35th street.
Pierce, Henry T., 237 East 116th st.
Pinkney, Howard, 24 East 41st street.
Pinner, Francis, 73 Rivington street.
Plasse, Louis de, 78 West 12th street.
Polk, Wm. M., 13 East 34th street.
Pomeroy, Oren D., 316 Lexington ave.
Pooley, Thomas R., 107 Madison ave.
Poore, Chas. T., 427 Fourth avenue.
Porter, P. Brynberg, 22 West 31st st.
Porter, Wm., 102d st. and 10th ave.
Post, Alfred C., 291 Madison ave.
Pramann, Adolf, 164 East 81st st.
Pratt, H. R., Boston Road, West Farms.
Pray, Isaiah F., 113 West 34th st.
Prentiss, Robert S., 275 East Broadway.
Prescott, Royal B., 50 West 28th st.
Prince, Christopher, 28 West 30th st.
Pulling, Ezra R., 368 Broome st.
Purcell, William J., 301 Mott street.
Purdy, Alfred E. M., 288 Madison ave.
Purdy, Alfred S., 288 Madison avenue.
Purdy, Samuel A., 51 West 50th street.
Putzel, Leopold, 252 East 48th street.
Quackenbos, Henry F., 39 West 18th st.
Raborg, Samuel A., 36 West 50th st.
Rade, Louis E., 205 East 50th street.
Raefle, M. G., 31 East 62d street.
Ramsdell, E. D., 158 East 33d street.
Ranney, Ambrose L., 156 Madison ave.
Ranney, J. W., 17 East 46th street.
Raphael, Henry, 236 East 51st street.
Rawson, E. G., 4 Lexington avenue.
Reed, Ira B., 18 East 126th street.
Reid, John J., 858 Lexington avenue.
Rengifo, Pio, 111 West 28th street.
Reynolds, James B., 29 West 14th st.
Rhein, Meyer L., 7 West 38th street.
Richards, Huntington, 156 West 53d st.
Richardson, Haynes L., 20 West Washington place.
Richardson, Waldo H., 20 West Washington place.
Ridlon, John F., 102 West 54th street.
Rieffel, Oscar A., 63 East Third st.
Ripley, John H., 605 Lexington avenue.
Robbins, Henry A., 24 West 26th st.
Roberts, M. Josiah, 4 West 28th street.
Roberts, Nathan S., 218 East Broadway.

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Roberts, S. M., 51 West 37th street.
Robertson, Thomas S., 22 East 20th st.
Robie, John W., 163 East 49th street.
Robinson, Andrew R., 356 West 42d st.
Robinson, Beverly, 37 West 35th st.
Robinson, Fred. C., 54 North Moore st.
Rockwell, A. D., 46 East 31st st.
Rodenstein, Louis A., St. Nicholas avenue and 155th st.
Roediger, T. F. M., 312 West 35th st.
Rogers, W. H., 318 West 15th street.
Romaine, DeWitt C., 80 Morton street.
Roof, Stephen W., 304 West 12th street.
Roosa, D. B. St. John, 20 East 30th st.
Rosenberg, Emil, 783 Lexington avenue.
Ross, James, 347 West 32d street.
Roth, Charles, 233 East 58th street.
Rowe, Alvah, 420 West 34th street.
Rudisch, J., 117 East 59th street.
Ruhl, Henry, Washington avenue, near 166th street.
Russell, C. P., 301 Mott street.
Sabine, Gustavus A., 8 East 24th st.
Sabine, Thomas T., 8 East 24th street.
Sanders, Charles W., 73 East 53d st.
Sands, Henry B., 35 West 33d street.
Sass, Luis F., 73 West 36th street.
Satterlee, F. LeRoy, 21 West 19th st.
Satterthwaite, Thomas E., 50 East 31st st.
Saunders, R. H., 127 East 60th street.
Sayre, Lewis A., 285 Fifth avenue.
Sayre, Lewis Hall, 285 Fifth avenue.
Scharlau, Barnim, 111 East 23d street.
Scheider, Julius, 241 Seventh street.
Schmidt, C. H. D., 229 West 42d street.
Schnetter, Joseph, 18 West 38th street.
Schoenemann, Chas. P. R., 339 Lexington avenue.
Schoeney, Lazarus, 170 East 71st street.
Schoonover, Warren, 682 Lexington ave.
Schuett, Albert, 221 East 13th street.
Schultze, Louis F., 102 East 35th street.
Schuyler, Wm. D., 52d street and Broadway.
Schwedler, Edward F., 155 West 34th st.
Schweig, Geo. M., 322 East 52d street.
Scott, George, 111 East 62d street.
Sears, H. Thatcher, 257 West 52d st.
Segnitz, Bernard, 207 West 45th street.
Seguin, E. C., 41 West 20th street.
Seibert, G. Augustus, 41 Seventh st.
Sell, E. H. M., 51 West 35th street.
Sewell, Walter D., 320 Lexington ave.
Sexton, Samuel, 12 West 35th street.
Shaffer, Newton M., 31 West 36th street.
Shaw, Eben S. D., 205 East 39th street.
Shrady, George F., 247 Lexington ave.
Shrady, John, 1974 Madison avenue.
Silver, Henry M., 8 East Third street.
Simmons, Chas. E., 742 Lexington ave.
Simrock, Francis, 64 East 12th street.
Simrock, Joseph, 64 East 12th street.
Sims, H. Marion, 267 Madison avenue.
Sims, J. Marion, 267 Madison avenue.
Skiff, George V., 171 West 45th street.
Smith, A. A., 85 Madison avenue.
Smith, Andrew H., 22 East 42d street.
Smith, Charles J., 210 East 116th street.
Smith, E. S., in Europe.
Smith, G. M., 14 East 17th street.
Smith, James O., 81 Clinton place.
Smith, J. Lewis, 227 West 49th street.
Smith, O. G., 130 Washington place.
Smith, Reuben, 305 East 13th street.
Smith, Stephen, 31 West 42d street.
Smith, S. Hanbury, 33 Union square.
Smith, Samuel W., 40 West 25th street.
Spann, J. H., 14 Fifth avenue.
Spannhake, Louis, 14 West 16th st.
Spalding, G. A., 3 East 125th street.
Spitzka, E. C., 130 East 50th street.
Sprague, W. W., 149 East 90th street.
Sproat, Louis D., 33 City Hall place.
Stacey, R. Q., 1023 Lexington avenue.
Steele, Theophilus, 152 West 49th st.
Stein, Alex. W., 30 West 15th street.
Stein, Charles, 334 Broome street.
Steinach, A., 122 Allen street.
Stephens, F. P., 83 Lexington avenue.
Stern, Lassar, 172 East 60th street.
Steurer, J. A., 126 East 57th street.
Stevens, George T., 33 West 33d street.
Stevens, William, 136 West 47th street.
Stewart, Robert, 221 West 42d street.
Stiebling, Geo. C., 45 St. Mark's place.
Stillman, Chas. F., 104 West 34th st.
Stimson, Daniel M., 9 East 13th street.
Stimson, Lewis A., 37 East 33d street.
Strachan, A. Russell, 66 Madison ave.
Straus, Ludwig, 211 East 13th street.
Strew, William W., 213 East 77th st.
Stronach, James W., 265 West 52d st.

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Studley, Wm. H., 160 East 83d street.
Sturgis, Frederic R., 16 West 33d street.
Sussdorf, Gustavus E., 20 West 257th st.
Swasey, John H., 79 Madison street.
Swezey, Gilbert H., 141 East 63d st.
Swift, Wm. Jonathan, 14 East 31st st.
Swinburne, R. E., 28 East 125th st.
Talson, George W., 19 Charles street.
Tauzsky, Rudolph, 211 East 77th st.
Taylor, Charles F., 100 West 53d street.
Taylor, Clarence O., 1449 Lexington ave.
Taylor, Isaac E., 7 East 36th street.
Taylor, James B., 84 Orchard street.
Taylor, James R., 234 East 12th street.
Taylor, Robert W., 42 West 21st street.
Teller, Seligman, 306 West 32d st.
Terry, Stanley D., 14 West 34th st.
Teschner, Jacob, 216 East 57th st.
Thomas, J. Clarke, 107 West 47th st.
Thomas, T. Gaillard, 294 Fifth ave.
Thompson, Beverhout, 251 West 52d st.
Thoms, Wm. F., 92 Madison street.
Thomson, Wm. H., 111 West 48d st.
Thurman, Wm., 517 Madison ave.
Tomlinson, Joseph, 72 Madison ave.
Tompkins, Byron V., 38 West 61st st.
Townsend, Fred. M., New York Hospital.
Trowbridge, Geo., 689 Madison ave.
Truax, John G., 17 East 127th st.
Tuck, Henry, 116 East 72d street.
Tucker, Carlos P., 48 West 26th st.
Tuffs, Edward G., 15 Oliver street.
Tully, Marcus E., 118 East 19th street.
Tuthill, Theo. K., 319 West 18th street.
Tuttle, George M., Emigrant's Hospital, Ward's Island.
Tyndale, Julius H., 31 East 22d street.
Vaill, Abby E., 42 West 26th street.
Valentine, F. C., "The Bristol," West 11th street.
Valentine, Samuel M., 177 Madison ave.
Valentine, Wm. A., 50 West 32d st.
Valk, Francis, 233 East 35th street.
Van Arsdale, Henry, 53 East 7th street.
Van Buren, Wm. H., 1 Park avenue.
VanderPoel, S. Oakley, 36 West 39th st.
Vandervoort, John L., 173 West 11th st.
Van Keuren, C., 58 Jane street.
Van Santvoord, Richard, 26 E. 125th st.
Van Wyck, Wm. H., 268 West 38th st.
Varley, C. Dixon, 348 West 22d st.
Vedder, Maus R., 690 Madison avenue.
Vermilye, W. H., 225 East 19th st.
Viele, Augustus, 579 Lexington avenue.
Vosburgh, Benjamin F., 257 W. 11th st.
Wade, Chas. Henry, 343 West 19th st.
Wagner, Clinton, 35 West 38th street.
Waitzfelder, Edward, 340 West 27th st.
Walker, Henry F., 294 Fifth avenue.
Wallace, W. B., 145 East 48th street.
Walmsley, Robert Wm., 672 Lexington avenue.
Walsh, Simon J., 36 Mott street.
Walton, Louis P., 102 West 34th street.
Ward, Charles S., 18 West 30th street.
Ward, Edwin F., 33 West 36th street.
Ward, G. Whitfield, 339 West 23d st.
Ward, James E., 35 West 62d street.
Ward, Owen J., 272 East Broadway.
Warden, Albert W., 41 West 9th street.
Wardwell, Wm. Lanterman, 237 East 17th street.
Warner, E. B., 48 Sixth avenue.
Warner, John W., 82 Lexington avenue.
Warren, John S., 204 West 38th street.
Warth, John W., 84 Rivington street.
Waterman, Sigismund, 104 West 49th st.
Watson, Wm. S., 105 West 47th street.
Wattles, Mary A., 238 East 18th street.
Watts, Robert, 49 West 36th street.
Webb, Z. Swift, 225 West 22d street.
Weber, Leonard, 186 West 34th street.
Webster, David, 266 Madison avenue.
Weir, Robert F., 37 West 33d street.
Weisse, Faneuil D., 61 West 22d street.
Weld, Francis M., 11 East 13th street.
Wells, Ovid P., 318 West 20th street.
Wendt, E. C., 136 West 34th street.
Westcott, Nelson S., 360 Bleecker st.
Weston, Wm. Henry, 406 West 22d st.
Wheeler, E. D., Union League Club.
Wheelock, George G., 75 Park avenue.
Wheelock, W. E., 13 West 48th street.
White, Francis V., 222 East 31st street.
White, J. Blake, 709 Madison avenue.
White, John P. P., 31 West 21st street.
White, Octavius A., 222 Second avenue.
White, Whitman V., 1321 Park avenue.
White, Wm. T., 130 East 30th street.
Whybrew, Charles T., 413 West 21 st.
Wiener, Joseph, 102 East 61st street.
Wiggin, F. H., 118 East 73d street.

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Wilcox, Thomas H., 359 West 42d st.
Williams, Cornelius, 23 Park avenue.
Williams, E. P., 25 Beekman place.
Williams, Mark H., 257 West 11th st.
Wilson, Benj. F., 1265 Fourth avenue.
Wilson, J. L., 361 West 43d street.
Winston, G. S., 34 East 32d street.
Witthaus, Rudolph A., 766 Madison ave.
Wood, Benj., Jr., 207 West 22d street.
Wood, Charles S., 171 West 47th street.
Woodbridge, Luther D., 24 West 24th st.
Woodbury, Edward C., 233 West 48th st.
Woolley, James V. S., 53 East 78th st.
Wright, Charles, 3 East 41st street.
Wright, J. Williston, 58 West 19th st.
Wyckoff, Peter B., 12 West 36th street.
Wyckoff, Samuel S., 145 West 41st st.
Wyeth, John A., 36 West 33d street.
Wylie, W. Gill, 40 West 40th street.
Wynkoop, Gerardus H., 5 East 18th st.
Yale, Leroy M., 438 Madison avenue.
Young, William, 145 West 42d street.
Zemansky, Abraham P., 107 W. 45th st.
Zinsser, Frederick, 47 West 28th st.

Number of members, 870.

NEW YORK ACADEMY OF MEDICINE.

(Instituted, 1847. Incorporated, 1851.)

12 West Thirty-first Street.

MEETINGS—Regular meetings first and third Thursday evenings in the month; Election of officers, first Thursday in January.

Officers. (*January* 5, 1882.)

Fordyce Barker, President.
Frank H. Hamilton, Robert F. Weir, H. T. Hanks, } Vice-Presidents.
Edwin F. Ward, Recording Secretary.
Horace P. Farnham, Treasurer.
John G. Adams, Corresponding Secretary.
Francis V. White, Statistical Secretary.
E. Darwin Hudson, Jr., Librarian.
John S. Brownne, Assistant Librarian.
W. H. Katzenbach, Assistant Recording Secretary.
G. M. Smith, Samuel S. Purple, Samuel T. Hubbard, William T. White, Everett Herrick. } Trustees.
Charles Wright, Treasurer of Trustees.

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Delegates to State Medical Society.

A. M. Jacobus, L. Elsberg, C. C. Lee,
Everett Herrick, W. A. Birdsall.

Resident Fellows.

Adams, J. G., Park Avenue Hotel.*
Agnew, C. B., 266 Madison avenue.
Alexander, Welcome T., 1086 Lexington avenue.
Allen, Thomas H., 19 Park avenue.
Anderson, J., 30 University place.
Anderson, James H., 30 University place.
Arnold, G. C., 115 East 30th street.
Arnold, J. W. S., 410 East 26th street.
Asch, Morris J., 23 West 30th street.
Ayres, S., 22 West 11th street.
Assenheimer, Augustus, 323 East 51st st.
Bacon, Gorham, 63 West 54th street.
Bahan, Thomas S., 467 Hudson st.
Ball, A. B., 42 West 36th street.
Bangs, L. Bolton, 127 East 34th street.
Banks, James L., 79 Fifth avenue.
Barker, Fordyce, 24 East 38th street.
Barstow, J. W., 104 East 30th street.
Beard, George M., 52 West 34th street.
Beckwith, Frank E., 571 Lexington ave.
Belden, E. B., 141 East 21st street.
Bell, C. M., 320 Fifth avenue.
Bermingham, E. J., 1260 Broadway.
Billington, C. E., 120 Madison avenue.
Birdsall, W. R., 144 East 74th street.
Blakeman, William N., 28 West 37th st.
Bliven, J. P., 234 S. 9th st., Brooklyn.
Blumenthal, Mark, 53 West 42d street.
Bosworth, Franche H., 26 West 46th st.
Bozeman, Nathan, 296 Fifth avenue.
Bradley, Edward, 11 West 30th st.
Brandis, Adolph C., Berlin.
Breakell, James A., 335 West 24th st.
Bronson, Edward B., 128 West 34th st.
Brush, E. F., ————
Bryant, Joshph D., 66 West 35th st.
Bulkley, Lucius D., 1 East 33d street.
Bull, Charles S., 47 East 23d street.
Bull, W. T., 2 East 33d street.
Bullard, W. E., 46 East 30th street.
Burchard, Thomas H., 24 West 40th st.
Burke, J., 147 Lexington avenue.
Burrall, Fred, A., 48 West 17th street.
Butler, George H., 42 East 66th street.
Caldwell, R. A., 50 West 34th street.
Cameron, Edward M., 47 West 26th st.
Campbell, Robert, 422 West 34th st.
Carpenter, Wesley M., 123 East 25th st.
Castle, Fred. A., 102 East 57th street.
Chalmers, Thomas C., 25 West 17th st.
Chamberlain, Geo. W., 153 East 39th st.
Chamberlain, Wm. M., 68 West 40th st.
Chambers, Porter F., 596 Lexington ave.
Chapin, Edward R., 4 West 27th street.
Chauveau, J. F., 6 Ludlow place.
Cheesman, T. M., in Europe.
Cheesman, T. M., Jr., 240 Fifth avenue.
Church, Allen S., 238 West 45th street.
Cisneros, Juan, 311 West 33d street.
Clark, A., 23 East 21st street.
Clements, James W. G., 64 West 56th st.
Cleveland, Clement, 59 West 38th st.
Cowles, E. O., 19 East 4th street.
Crampton, Henry E., 221 Second ave.
Crane, John J., 31 West 21st street.
Crane, Joseph S., 41 West 45th street.
Cushman, Wm. F., 325 West 22d st.
Cutler, George R., 312 Second avenue.
Cypert, John R., 656 Lexington avenue.
Dalton, John C., 43 West 48th street.
Dana, Samuel W., 50 West 28th street.
DeGarmo, Wm. B., 255 West 24th st.
DeLuna, A. B., 368 West 32d street.
Delafield, Francis, 12 West 32d street.
Delavan, D. Bryson, 59 West 38th st.
Dennis, Fred. S, 21 East 21st street.
Denslow, LeGrand F., 140 East 27th st.
Derby, Richard H, 9 West 35th street.
Dessau, S. Henry, 75 West 55th street.
Detmold, William, 38 East 9th street.
Dexter, B. F., 130 West 43d street.
Dieffenbach, R. G. L., 224 East 48th st.
Douglas, J. H., 48 East 26th street.

* Where no town is mentioned, New York is to be understood.

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Draper, Wm. H., 4 East 37th street.
Duncan, William F., 140 West 42d st.
Durant, Ghislani, 46 West 32d st.
Eden, John H., Fordham, N. Y.
Eliot, Ellsworth, 48 West 36th street.
Elsberg, Louis, 614 Fifth avenue.
Emerson, J. H., 81 Madison avenue.
Emmet, Thomas A., 89 Madison ave.
Farnham, Horace P., 36 West 40th st.
Farrington, Joseph O., 1991 Madison ave.
Finnell, Thomas C., 132 W. Houston st.
Fleming, Martin J., 132 Lexington ave.
Flint, Austin, 418 Fifth avenue.
Flint, Austin, Jr., 14 West 33d street.
Foster, Frank P., 32 East 31st st.
Foster, Joel, 265 Fourth avenue.
Fowler, George B., 11 West 45th street.
Fox, George H., 18 East 31st street.
Frankel, Edward, 217 East 17th street.
Frazer, John G., 321 West 35th street.
Frothingham, Wm., St. Nicholas avenue corner 157th street.
Fruitnight, J. Henry, 259 West 54th st.
Fuller, Robert M., 136 West 42d street.
Garrigues, H. J., 137 West 22d street.
Garrish, John P., 417 West 23d street.
Gibney, Virgil P., 135 East 42d street.
Gillette, Walter R., 149 West 23d st.
Gomez, Horatio, 321 West 50th st.
Gorton, O. A., 33 East Ninth street.
Gouley, John W. S., 311 Madison ave.
Griswold, Henry, 356 West 30th st.
Habirshaw, John, 137 East 46th street.
Hadden, Alexander, 155 East 51st st.
Hall, Edwards, 17 East 66th street.
Hall, William H., 129 East 54th street.
Hamilton, Allan McL., 43 East 33d st.
Hamilton, Frank H., 43 West 32d st.
Hanks, Horace T., 55 East 59th street.
Hardy, Wm. L., 366 West 27th street.
Harris, Elisha, 65 Bible House, Astor pl.
Harrison, Geo. T., 221 West 23d street.
Hart, George, 59 West 35th street.
Harwood, Edward C., 44 West 49th st.
Healy, Thomas Francis, 329 West 23d st.
Hedges, David A., 26 West 46th street.
Heineman, Henry N., 38 West 21st st.
Henna, J. J., 112 East 24th street.
Henry, M. H., 427 Fifth avenue.
Herrick, Everett, 126 Madison avenue.
Heywood, C. F., 150 West 14th street.
Hickok, George B., 242 East 12th st.
Hinton, John H., 41 West 32d street.
Hitchcock, Urban G., 51 West 29th st.
Hodgman, Abbott, 141 East 38th st.
Hogan, E. J., 308 Madison avenue.
Hogan, Michael, 119 East 12th st.
Howe, Jos. W., 38 West 24th street.
Hubbard, S. T., 27 West 9th street.
Hudson, E. Darwin, Jr., 227 W. 22d st.
Hull, Jos. J., 158 West 34th street.
Humphreys, Geo. H., 23 East 47th st.
Hunter, Alexander S., 32 East 29th st.
Hunter, James B., 2 East 33d street.
Hustace, Francis, 413 Madison ave.
Husted, N. C., 361 West 42d street.
Hutton, Allan C., 24 Second pl., Brooklyn.
Ives, F. L., 117 East 30th street.
Jackson, Geo. F., 482 West 153d st.
Jacobi, Abraham, 110 West 34th street.
Jacobi, Mary Putnam, 110 West 34th st.
Jacobus, A. M., 212 West 53d street.
Janes, Edward H., 208 West 42d st.
Janeway, Ed. G., 51 East 25th street.
Janvrin, Jos. E., 191 Madison ave.
Jewett, Chas., 307 Gates ave., Brooklyn.
Johnson, John G., 153 Joralemon st., Brooklyn.
Johnson, Laurence, 323 West 27th st.
Jones, Wm. W., 51 West 28th street.
Judson, A. B., 129 East 17th street.
Kalish, Richard, 32 East 33d street.
Katzenbach, W. H., 72 West 45th st.
Kellogg, Theodore H., 48 West 36th st.
Kemp, Wm. M., 267 West 23d street.
Kennedy, James, 417 West 51st street.
Kershner, Edward, Union League Club.
Ketch, Samuel, 328 West 29th street.
Keyes, Edward L., 1 Park avenue.
Kinnicutt, Frank P., 42 West 37th st.
Knapp, Herman, 25 West 24th st.
Knight, Charles H., 121 West 34th st.
Knight, James, 135 East 42d street.
Langmann, Gustav, 151 West 43d st.
Lawrence, Jonathan S., 56 West 35th st.
Leale, Charles A., 749 Fifth avenue.
Leaming, James R., 160 West 23d st.
Lee, Charles C., 79 Madison avenue.
Lefferts, George M., 6 West 33d street.
Leo, S. N., 103 West 55th street.
Lewis, Daniel, 147 East 45th street.
Lidell, J. A., 17 Clinton place.

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Lincoln, Rufus P., 22 West 31st st.
Linsly, Jared, 22 Lafayette place.
Little, James L., 60 West 40th street.
Livingston, W. C., 357 West 30th st.
Lockrow, Arthur V. B., 709 Madison ave.
Loomis, Alfred L., 31 West 34th st.
Lusk, Wm. T., 47 East 34th st.
Lynch, P. J., 216 East 13th st.
Lyons, Frederick A., 244 West 49th st.
McBride, Thomas A., 47 East 25th st.
McLaury, Wm. M., 344 West 42d st.
McLeod, S. B. W., 147 West 23d st.
Macgregor, James R., 153 East 83d st.
Markoe, T. M., 20 West 30th st.
Martin, T. Dwight, 161st st., n. Morris pl.
Mason, Lewis Duncan, 171 Joralemon street, Brooklyn.
Maxwell, Wm. H., 168 Fifth avenue.
Metcalfe, John T., 18 West 30th st.
Milhau, John J., 41 Lafayette place.
Milne, Charles, 124 East 45th st.
Miranda, Ramon L., 54 West 37th st.
Monell, Jos. A., 236 West 22d street.
Morris, S. F., 168 Lexington avenue.
Morrow, P. Albert, 13 East 41st street.
Morton, W. J., 15 East 45th street.
Mourraille, G., 74 West 12th street.
Mundé, Paul F., 20 West 45th street.
Neftel, Wm. B., 16 East 48th street.
Newcomb, Gilbert L., 66 Lexington ave.
Nichols, Charles Henry, Bloomingdale Insane Asylum, 117th st. and Boulevard.
Nichols, Truman, 267 East Broadway.
Nicoll, Henry D., 7 West 39th street.
Noeggrath, Emil, 42 West 35th street.
Noyes, Henry D., 233 Madison avenue.
O'Sullivan, R, J., 119 Alexander avenue.
Orton, S. H., 145 East 21st street.
Otis, Fessenden N., 108 West 34th st.
Page, R. C. M., 31 West 33d street.
Packard, Charles W., 937 Park avenue.
Pardee, Charles Inslee, 10 West 29th st.
Parker, Willard, 41 East 12th street.
Parker, W., Jr., 41 East 12th street.
Partridge, Edward L., 13 West 9th st.
Peaslee, Edward H., 29 Madison ave.
Perry, James L., 102 West 48th street.
Perry, John Gardner, 113 Madison ave.
Peters, George A., 12 West 20th street.
Peters, John C., 83 Madison avenue.
Piffard, Henry G., 10 West 35th street.
Pinkney, Howard, 24 East 41st street.
Polk, William M., 13 East 34th street.
Pomeroy, Oren D., 316 Lexington ave.
Pooley, Thomas R., 107 Madison ave.
Poore, Charles T., 427 Fourth avenue.
Porter, P. Brynberg, 22 West 31st st.
Post, Alfred C., 291 Madison ave.
Post, W. H. B., 191 Fulton street.
Powell, Seneca D., 42 West 40th street.
Pratt, Henry R., West Farms.
Purdy, Alfred E. M., 288 Madison ave.
Purdy, Alfred S., 288 Madison avenue.
Purdy, Samuel A., 51 West 50th street.
Purple, S. S., 36 West 22d street.
Putzel, Leopold, 252 East 48th street.
Quackenbos, Henry F., 39 West 18th st.
Raborg, Samuel A., 36 West 50th st.
Ramsdell, E. D., 158 East 33d street.
Ranney, Ambrose L., 156 Madison ave.
Read, Ira B., 18 East 126th street.
Reid, John J., 858 Lexington avenue.
Reynolds, James B., 29 West 14th st.
Richards, J. W., 12 Clinton place.
Roberts, Nathan S., 218 East Broadway.
Roberts, S. M., 51 West 37th street.
Robinson, A. R., 356 West 42d street.
Robinson, Beverly, 37 West 35th street.
Robinson, George W., New York.
Rockwell, A. D., 46 East 31st street.
Rodenstein, Louis A., St. Nicholas ave. and 155th street.
Roof, Stephen W., 304 West 12th st.
Roosa, D. B. St. John, 20 East 30th st.
Rowe, Alvah, 410 West 34th street.
Sabine, Gustavus A., 8 East 24th street.
Sabine, Thomas T., 8 East 24th street.
Sanders, Edward, 206 East 79th street.
Satterlee, F. LeRoy, 21 West 19th st.
Satterthwaite, Thomas E., 50 E. 31st st.
Sayre, Lewis A., 285 Fifth avenue.
Sayre, Lewis Hall, 285 Fifth avenue.
Schultze, Louis F., 102 East 35th street.
Schuyler, W. O., "The Strathmore," Broadway, cor. 52d street.
Seguin, E. C., 41 West 20th street.
Sell, E. H. M., 51 West 35th street.
Sexton, Samuel, 12 West 35th street.
Shaffer, Newton M., 31 West 36th st.
Shrady, John, 1974 Madison ave.
Silver, Henry M., 8 East Third street.

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Sims, J. Marion, 267 Madison ave.
Smith, A. A., 85 Madison ave.
Smith, Andrew H., 22 East 42d street.
Smith, G. M., 14 East 17th street.
Smith, J. Lewis, 227 West 49th street.
Smith, James O., 81 Clinton place.
Smith, O. G., 30 Washington place.
Smith, Stephen, 31 West 42d street.
Smith, S. Hanbury, 33 Union square.
Stedman, Thomas L., 126 East 59th st.
Stein, Alex. W., 30 West 15th street.
Stimson, Daniel M., 9 East 13th street.
Strachan, A. Russell, 66 Madison ave.
Sturgis, Frederic R., 16 West 32d st.
Sussdorff, Gustavus E., 20 West 25th st.
Swasey, John H., 79 Madison ave.
Tauszky, Rudolph, 211 East 77th st.
Taylor, Charles F., 100 West 53d st.
Taylor, Isaac E., 7 East 36th street.
Taylor, James R., 234 East 12th street.
Teller, Seligman, 306 West 33d street.
Thomas, T. Gaillard, 294 Fifth avenue.
Thoms, Wm. F., 92 Madison street.
Thomson, Wm. H., 111 West 43d st.
Thurman, Wm., 517 Madison avenue.
Tucker, Carlos P., 43 West 26th street.
VanArsdale, Henry, 53 Seventh street.
Van Buren, Wm. H., 1 Park ave.
Vanderpoel, E., 228 East 68th street.
Vander Poel, S. O., 36 West 39th st.
Van Santvoord, Richard, 26 E. 125th st.
Van Winkle, E. H., 25 West Ninth st.
Varley, C. Dixon, 348 West 22d street.
Wagner, Clinton, 35 West 38th street.
Ward, Edwin F., 33 West 36th street.
Warner, E. B., 82 Carmine street.
Warner, John W., 82 Lexington ave.
Warren, John S., 204 West 38th street.
Webb, Z. Swift, 225 West 22d street.
Weber, Leonard, 136 West 34th st.
Webster, David, 266 Madison ave.
Weir, Robert F., 37 West 33d street.
Weisse, Faneuil D., 51 West 22d street.
Welch, William H., 21 East 21st st.
Weld, Francis M., 11 East 13th st.
Wells, Ovid P., 318 West 20th st.
White, Francis V., 222 East 31st street.
White, J. Blake, 709 Madison ave.
White, John P. P., 31 West 21st st.
White, Octavius A., 222 Second ave.
White, Wm. T., 130 East 30th street.
Wiener, Joseph, 102 East 61st street.
Wilder, Rufus L., 146 East 127th st.
Winston, G. S., 42 West 39th street.
Winters, Joseph E., 36 West 32d st.
Wood, Charles S., 171 West 47th st.
Woodbury, Edward C., 233 West 48th st.
Woolley, James V. S., 53 East 79th st.
Wright, Charles, 29 West 36th st.
Wylie, W. Gill, 40 West 40th street.
Yale, Leroy M., 488 Madison avenue.
Young, William, 145 West 42d street.

Number of Resident Fellows, - - 342.
Of these there belong to County Societies, 303.

NIAGARA COUNTY.

NIAGARA COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, first Tuesday in June; semi-annual, first Tuesday in January; quarterly, first Tuesday in March and September.

Officers. (*June* 6, 1882.)

J. W. Grosvenor, President.
H. C. Hill, Vice-President.
T. B. Cosford, Secretary.
John Foote, Treasurer.

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Censors.

F. Brockway. J. I. McFadden. C. A. Sage.

Delegates to State Medical Society.

M. S. Kittinger. W. J. Ransom.

Committee on Hygiene.

M. S. Kittinger, Chairman,
G. H. Saddleson,
H. A. Wilmot,
W. C. Raymond,
W. W. Bradley,
F. J. Baker.
A. G. Skinner,
T. B. Cosford,
J. W. Corman,
J. I. McFadden,
H. G. Chamberlain,
E. F. Pyle,
A. N. Moore.
F. A. Rice,
W. C. Huggins,
M. L. Lang,

Members.

Baker, F. J., Lockport.
Bradley, W. W., Lockport.
Balcolm, Lafayette, Lockport.
Bickford, John W., Lockport.
Chamberlain, Hervey G., Wilson.
Clark, Simeon T., Lockport.
Cook, Nathan, Ransomville.
Cole, Electus, Middleport.
Corman, John W., Beach Ridge.
Cosford, T. B., Lockport.
Davison, Rexford, Lockport.
Duff, John M., Royalton.
Eddy, G. W., Lewiston.
Faling, Peter, Gasport.
Falkner, Wm. J., Youngstown.
Fassett, D. S., Lockport.
Foote, John, Lockport.
Gallagher, Francis W., Lockport.
Gould, C. W., Middleport.
Gould, William B., Lockport.
Grosvenor, J. W., Lockport.
Harrington, D. W., Lockport.
Hartwell, J. B., Lockport.
Helmer, J. H., Lockport.
Hill, H. C., Lockport.
Huggins, W. Q., Sanborn.
Kittinger, M. S., Lockport.
Lang, M. L., Suspension Bridge.
Leonard, A. M., Lockport.
McCollum, William, Lockport.
McFadden, J. I., Olcott.
Moore, A. N., Rapids Bridge.
Murphy, C. P., Royalton.
Murphy, D. H., Royalton.
Palmer, C. N., Lockport.
Paulding, J. A., Pendleton.
Pyle, E. F., Pekin.
Ransom, W. J., Lockport.
Raymond, Wm. C., Cambria.
Rice, Fred. A., Niagara Falls.
Reed, Charles H., Wilson.
Saddleson, G. H., Newfane.
Sage, Clinton A., Pekin.
Skinner, A. G., Youngstown.
Smith, E., Lewiston.
Tabor, N. B., Wilson.
Tryon, A. Walter, Lockport.
Turner, C. H., Hartland.
Wilmot, H. A., Johnson's Creek.

Number of Members, 49.

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ONEIDA COUNTY.

ONEIDA COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in July, semi-annual, second Tuesday in January; quarterly, second Tuesday in October and April. The semi-annual meeting is held in Rome; the others in Utica.

Officers. (*July* 11, 1882.)

Jacob Hunt, President.
A. R. Simmons, Vice-President.
J. S. O'Hara, Secretary.
J. K. Chamberlayne, Treasurer.
Wm. M. Gibson, Librarian.

Censors.

T. M. Flandrau, L. A. Tourtellot, Norton Wolcott,
Edwin Evans, J. E. West.

Delegates to State Medical Society.

J. S. O'Hara. Henry C. Palmer, George Seymour.

Members.

Armstrong, James A., Clinton.
Babcock, W. A., Oriskany.
Baker, Smith, Whitestown.
Bagg, M. M., 164 Park avenue, Utica.
Barnum, D. A., Cassville.
Barrows, A. A., Clinton.
Barrows, F. M., Clinton.
Bergen, Thomas J., 93 John st., Utica.
Bersee, David, Stanwix.
Booth, Walter, Boonville.
Booth, W. H., 172 Genesee st., Utica.
Brush, Edward N., New York State Lunatic Asylum.
Buel, Wales, Walesville.
Bullock, E. H., New York Mills.
Cavana, Martin, Oneida, Madison Co.
Chamberlayne, J. K., 1 Steuben park, Utica.
Churchill, Alonzo, 170 Genesee st., Utica.
Clark, Wallace, 136 Park avenue, Utica.
Cleveland, G. W., Waterville.
Cleveland, W. P., Waterville.
Comstock, Ira M., New York Mills.
Cook, Mathias, 92 Columbia st., Utica.
Cox, T. H., Lee Center.
Crane, Delos A., Holland Patent.
Dodge, A. P., Oneida Castle.
Douglass, Isaac H., 246 Genesee street, Utica.
Douglass, James W., Boonville.
Drummond, J. B., Westmoreland.
Du Bois, H. G., Camden.
Dunn, Martha M, 187 Genesee st., Utica.
Ellinwood, Eliza M., Rome.
Evans, Edwin, Rome.
Fitch, H. A., 34 Columbia st., Utica.
Flandreau, Thomas M., Rome.
Foord, Henry, Rome.

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Ford, W. E., 223 Genesee street, Utica.
Fraser, Charles E., Rome.
Fraser, Charles E., Jr., Rome.
Fraser, Jefferson C., Lee.
Frasier, Robert, Camden.
Freeman, Isaac, Vernon.
Fuller, Earl D., 66 Varick street, Utica.
Gardner, H. Dwight, 187 Genesee st., Utica.
Gary, F. A., Vernon.
Gibson, Wm. M., 187 Genesee st., Utica.
Gillette, A. A., Westernville.
Gorton, Francis T., Waterville.
Glass, J. H., 175 Park avenue, Utica.
Gray, Jno. P., New York State Lunatic Asylum.
Griswold, W. R., New Hartford.
Guiteau, Luther, Trenton.
Harberer, Joseph V., 23 Fayette street, Utica.
Haskins, Benjamin F., Prospect.
Hastings, Herbert, 365 Genesee street, Utica.
Hays, Thomas, Deerfield, office, Utica.
Hews, Robert H., North Western.
Holden, A. L., 4 Taylor avenue.
Hopkins, Ira D., 25 Blandina st., Utica.
Hughes, David, Washington Mills.
Hunt, Jacob, 56 Whitesboro st., Utica.
Hunt, J. G., 192 Genesee st., Utica.
Hutchinson, Edwin, 224 Genesee street, Utica.
Hutchinson, F. E., 7 Devereux st., Utica.
James, Wm. H., 166 Genesee st., Utica.
Jones, Herbert G., 224 Genesee st., Utica.
Jones, H. W., Waterville.
Krug, George A., 220 Bleecker st., Utica.
Kuhn, William, Rome.
Lawton, E. J., Rome.
Marchand, Juliet E., Rome.
Menzie, G. Leroy, Vernon.
Merrick, Charlotte L., 187 Genesee st., Utica.
Munger, Charles, Knoxboro.
Nold, John B., Boonville.
Nelson, Wm. H., Taberg.
O'Hara, John S., 124 John st., Utica.
Palmer, H. C, Rome.
Palmer, W. B., 30 South street, Utica.
Pillmore, Johnson, Delta.
Porter, H. N., New York Mills.
Preston, Medina, Sangerfield.
Ralph, William S., 170 Genesee st., Utica.
Raynor, Edwin W., Trenton.
Reid, C. C., Rome
Reid, H. G., Westernville.
Rinkle, LaFayette, Boonville.
Roseboom, J. L., 172 Genesee st., Utica.
Russell, Chas. P., 196 Genesee st., Utica.
Russell, Wm., 196 Genesee st., Utica.
Sehr, G. N., Taberg.
Seymour, Geo., 192 Genesee st., Utica.
Simmons, A. B., New Hartford.
Sloan, Hugh, 76 Varick st., Utica.
Smith, A. H., Camden.
Smith, Charles E., Whitestown.
Steinhausen, Franz, 71 Columbia street, Utica.
Stephens, Edward J., 183 Genesee street, Utica.
Swartwout, L., Prospect.
Tefft, Chas. B., 159 Genesee st., Utica.
Thomas, P. Henry, 100 Washington st., Utica.
Tourtellot, Louis A., 49 Broad st., Utica.
Veeder, T. A., 29 Oneida st., Utica.
Ward, Charles G., Bridgewater.
Watson, Amanda C. Mrs., 97 Charlotte street, Utica.
Watson, John, 97 Charlotte st., Utica.
West, Joseph E., 171 Genesee st., Utica.
West, M. C., Rome.
Whaley, J. S., Rome.
Williams, E. G., Remsen.
Wilson, Claude, Waterville.
Wolcott, Norton, Holland Patent,
Wolcott, Samuel G., 171 Genesee street, Utica.

Number of Members, 112.

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ONONDAGA COUNTY.

(Organized in 1806.)

ONONDAGA COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in June; semi-annual, last Tuesday in January; quarterly, at such intermediate times as the Society may direct. All meetings are held in Syracuse.

Officers. (*June* 13, 1882.)

John VanDuyn, President
L. C. Skinner, Vice-President.
D. M. Totman, Secretary.
G. W. Cook, Treasurer.
L. F. Weaver, Librarian.

Censors.

Alfred Mercer, H. D. Didama, M. H. Blynn,
W. W. Munson.

Delegates to State Medical Society.

Ely Van De Warker, J. O. Slocum, J. D. Potter.

Censor of the College of Medicine, Syracuse, N. Y.

J. B. Potter.

Members.

Aberdein, Robert, 2 Greeley Block.*
Allen, Henry B., Baldwinsvile.
Baker, C. O., Elbridge.
Bartlett, Levi, Skaneateles.
Benedict, A. C., 48 Montgomery street.
Benedict, M. D., 87 Montgomery street.
Billington, C. E., Manlius.
Blynn, M. H., Cicero.
Brown, G. L., Euclid.
Brown, U. Higgins, 52½ Warren street.
Browne, John W., Mottville.
Butler, F. H., 48 Seymour street.
Carr, James E., Jordan.
Coe, J. H., 207 East Genesee street.
Cook, George W., 80 South Salina street.
Crowell, H. C., 116 Shonnard street.
Dallas, A. J., 48 Warren street.
Dibble, O. G., Pompey.
Didama, H. D., 112 South Salina street.
Doyle, Gregory, 31½ West Fayette st.
Draper, G. W., Geddes.
Dunlap, J. P., 108 East Genesee street.
Earle, G. W., Tully.
Earll, George W., Skaneateles.

*Where no town is mentioned, Syracuse is to be understood.

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Edwards, A. S., 367 North Salina street.
Edwards, G. A., Catharine cor. Lodi sts.
Elsner, H. L, 248½ North Salina street.
Fairchild, M. B., 363 North Salina st.
Fry, John W., Hawley cor. William sts.
Graves, J. H., 70 Gifford street.
Hatch, Carrie A., 6 East Onondaga st.
Higgins, S. M., Memphis.
Holcomb, Mrs. E. J., 67 E. Fayette st.
Jacobson, Nathan, 27 Montgomery st.
Johnson, W. R., 19 Yates Block.
Justin, Joel G., 67 East Fayette st.
Kendall, J. V., Baldwinsville.
Kinne, George R., Manlius.
Knapp, E. A., Jamesville.
Knapp, J. W., Geddes.
Kneeland, Jonathan, South Onondaga.
Marshall, J. S., 60 Warren street.
Maxson, Edwin R., 208 Madison street.
Mercer, Alfred, 40 Montgomery street.
Mercer, A. Clifford, 40 Montgomery st.
Mowris, J. A., Lafayette.
Munson, W. W., Otisco.
Mumford, E. S., 74 East Fayette street.
Nims, Horace, Manlius.
Parsons, Israel, Marcellus.
Pease, R. W, 36 Montgomery street.
Phillips, Erastus B., 312 S. Salina st.
Plant, William T., 18 Harrison street.
Porter, W. W., Geddes.
Post, H. W., Marcellus.
Potter, J. D., Delphi.
Pritchard, H. B., Euclid.
Rood, M. G., Onondaga.
Sargent, George W., Skaneateles.
Searl, I. H., 38 East Onondaga street.
Shumway, J. P., Geddes.
Skinner, E. C., East Syracuse.
Skinner, L. C., Belle Isle.
Slocum, Charles E., 64 S. Salina street.
Slocum, J. O., Camillus.
Smith, Wm. Manlius, 49 E. Onondaga st.
Stanton, Margaret, 23 Montgomery st.
Stevens, Lucius, 143 East Genesee st.
Strong, F. A., Brewerton.
Taber, Susan J., Skaneateles.
Tolman, H. P., Onondaga Valley.
Tefft, N. R., Onondaga.
Totman, D. M., 25 Montgomery street.
Tripp, VanDyke, Borodino.
Van De Warker, Ely, 65 Montgomery st.
VanDuyn, John, 111 South Salina st.
Wallace, J. C. B., Baldwinsville.
Weaver, Lewis F., 13 Green street.
Weed, H. A., Jordan.
Whitford, James, Onondaga Valley.
Wiggins, Hiram, Elbridge.
Wilbur, H. B., Idiot Asylum, Syracuse.
Wilbur, N., Fayetteville.

Number of Members, 83.

ONTARIO COUNTY.

ONTARIO COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in July; quarterly, second Tuesday in October, January and April.

Officers. (*July* 11, 1882.)

J. R. Pratt, President.
J. H. Budd, Vice-President.
F. D. Vanderhoof, Secretary and Treasury.

Delegate to State Medical Society.

F. R. Bentley.

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Members.

Allen, A. D., Gorham.
Allen, D. S., Hall's Corners.
Allen, J. H., Gorham.
Bennett, H. F., Canandaigua.
Bentley, F. R., Cheshire.
Budd, J. H., Geneva.
Carson, M. R.. Canandaigua.
Carson, W. A., Rushville.
Cheney, W. M., West Bloomfield.
Clarke, H. K., Geneva.
Crittenden, A. G., Clifton Springs.
Draper, J. F., Victor.
Eddington, W. F., Geneva.
Eddy, H. M., Geneva.
Flood, G. E., Geneva.
Flood, J., Geneva.
Gallagher, G. S., Naples.
Green, N. E., Honeoye.
Hallenbeck, O. J., Canadaigua.
Hayes, J. B., Canandaigua.
Hicks, W. S., Bristol.
Hollister, E. O., East Bloomfield.
Hutchins, John, Cheshire.
Keith, Nellie L., Geneva.
Jackson, C. O., Victor.
Jewett, H., Canandaigua.
Jewett, J. H., Canandaigua.
Lewis, Leroy, Orleans.
Mailler, F. W., Phelps.
Mallery, D. J., Bristol.
Mead, A. M., Victor.
Nichols, H. W., Canandaigua.
Palmer, J. W., Victor.
Picot, M. H., Geneva.
Pratt, J. R., Manchester.
Sayre, E. B., Allen's Hill.
Simmons, E. W., Canandaigua.
Smith, J. T., Canandaigua.
Swart, W, T., Canandaigua.
Vanderhoof, F. D., Phelps.
Van Deusen, G. H., Gorham.
Van Vleet, P. P., Shortsville.
Webster, F. F., East Bloomfield.
Wilbur, L. F., Honeoye.

Number of Members, 44.

ORANGE COUNTY.

ORANGE COUNTY MEDICAL SOCIETY.

(Organized July 1, 1806.)

MEETINGS—Annual, first Tuesday in June; semi-annual, first Tuesday in October.

Officers. (*June* 6, 1882.)

R. V. K. Montfort, President.
T. D. Mills, Vice-President.
Burke Pilsbury, Secretary.
A. J. Jessup, Treasurer.

Censors.

H. K. Bradner, Arthur Pell, A. B. Leggett, H. H. Robinson.

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Delegate to State Medical Society.

J. C. Boyd.

Members.

Boyd, J. C., Monroe.
Bradner, H. K., Warwick.
Bradner, Wm. B., Warwick.
Carpenter, S. C., Chester.
Condict, T. D., Searsville.
Cook, Avery, Otisville.
Cuddeback, Wm. L., Port Jervis.
Douglas, Wm. E., Middletown.
Dubois, S. D., Blooming Grove.
Eager, Wm. B., Middletown.
Ely, Smith, Newburgh.
Emory, G. A., Middletown.
Farries, A. P., Florida.
Gartzmann, Gaslav, Newburgh.
Goodman, A., Salisbury.
Goodman, A. M., Jr., Salisbury.
Hardenburgh, Port Jervis.
Hunt, James H., Port Jervis.
Irving, R. C., Campbell Hall.
Jessup, A. J., Goshen.
Johnston, J. D., Middletown.
Leggett, A. B., Montgomery.
Myer, E. R. G. Mrs., Turner's.
Mills, T. D., Middletown.
Moffatt, J., Washingtonville.
Montfort, R. V. K., Newburgh.
Ormsbee, Clarence, East Coldenham.
Pell, Arthur, Goshen.
Pillsbury, B., Middletown.
Putney, G. E., Howell's Depot.
Robinson, H. H., Goshen.
Seely, H. C., Amity.
Seely, W. T., Amity.
Smiley, D. B., Scotchtown.
Smiley, J. H., Scotchtown.
Smith, C. P., Chester.
Stone, M. C., Newburgh.
Thompson, J. H., Goshen.
Van Etten, S., Port Jervis.
Writer, Theodore, Otisville.

Number of Members 40.

ORLEANS COUNTY.

ORLEANS COUNTY MEDICAL SOCIETY.

(Organized January 8, 1873.)

MEETINGS—Annual, first Thursday in November; semi-annual, first Thursday in May.

Officers. (*November* 3, 1881.)

E. R. Armstrong, President.
J. F. Millard, Vice-President.
G. L. Van Allen,* Secretary and Treasurer.

Censors.

* Left the county, since annual meeting; Wm. C. Bailey, acting Secretary.

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Delegate to State Medical Society.

H. C. Tompkins.

Members.

Armstrong, E. R., Holley.
Bailey, William C., Albion.
Bamber, T. R., Carlton.
Barnum, Eugene, Waterport.
Chapman, James, Medina.
Cochrane, Samuel R. Q., Albion.
Crabb, E. M., Clarendon.
Curtis, Daniel, Jeddo.
Dolley, J. G., Albion.
Fairman, Charles E., Lyndonville.
Fitch, Willard, Knowlesville.
Fuller, D. E., Yates.
Hall, E. D., Knowlesville.
Jenkins, John, Shelby.
Jones, C. M., Waterport.
Jones, George H., Medina.
June, F. L., Waterport.
Lewis, H. W., Albion.
Lewis, Tousley B., Albion.
Millard, J. F., Albion.
O'Brien, Wm. D., Kendall.
Randall, J. W., Albion.
Rogers, R. F., Shelby.
Smith, R. W., Barre Centre.
Squire, E. P., Albion.
Taylor, J. H., Holley.
Tompkins, E. M., Knowlesville.
Tompkins, H. C., Knowlesville.
Watson, Mrs. Harriet, Albion.
Weat, E. S., Waterport.
Williams, Wm., North Parma, Monroe Co.

Number of Members, 31.

OSWEGO COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF OSWEGO.

(Organized in 1821.)

MEETINGS—Annual, second Tuesday in June; semi-annual, second Tuesday in December, at Oswego.

Officers. (*June* 13, 1882.)

James K. Stockwell, President.
George P. Johnson, Vice-President.
Pascal M. Dowd, Recording Secretary.
John E. Hamill, Corresponding Secretary.
C. G. Bacon. Treasurer.
D. J. Phillips, Librarian

Censors and Committee on Medical Ethics.

D. Pardee, C. Macfarlane, T. J. Green, D. T. Whyborn. J. W. Eddy.

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Delegates to State Medical Society.

J. W. Eddy, D. T. Whyborn.

Members.

Acker, Dillon, Hannibal.
Acker, Wm. J., Hannibal.
Andrews, S. D., Oswego Falls.
Bacon, C. G., Fulton.
Bacon, C. J., Williamstown.
Bates, N. W., Central Square.
Bradbury, M., Mexico.
Becker, D. D., Mexico.
Bulkley, J. Lyman, Sandy Creek.
Burrows, Eggleston, Oswego.
Caldwell, Henry W., Pulaski.
Carroll, W. B., Phœnix.
Carpenter. George E., Sandbank.
Clark, C. C. P., Oswego.
Coe, A. S., Oswego.
Cooley, R. N., Hannibal Center.
Coy, William B., Schroeppel.
Crockett, S. J., Sandy Creek.
Dayton, Gilson A., Mexico.
Desaulniers, A. A., Oswego.
Dewitt, Byron, Oswego.
Dowd, Pascal M., Oswego.
Drake, D. D., Central Square.
Drury, Emory J., Gilbert's Mills.
Eddy, Joseph W., Oswego.
Gardner, George, Williamstown.
Gardner, Joseph, Williamstown.
Green, T. J., Parish.
Griffin, James A., Constantia.
Hall, W. A., Fulton.
Hamill, A. P., Phœnix.
Hamill, John E., Phœnix.
Havens, Cyrus, Hannibal.
Heaton, Charles E., Mexico.
Huntington, J. W., Mexico.
Hutchins, Mary K., Oswego.
Johnson, George P., Mexico.
Jones, Ira L., Minetto.
Kingston, S. T., Oswego.
Lawton, D. A., Pulaski.
Lee, Charles M., Fulton.
Lee, C. R., Fulton.
Loomis, Warren H. Vermilion.
Low, F. S., Pulaski.
Macfarlane, C., Oswego.
Mease, John H., Oswego.
Nelson, George W., Orwell.
Pardee, D., Fulton.
Pero, Joseph, West Amboy.
Phelps, H. D. C., Palermo.
Potter, F. F., Cleveland.
Rainier, E., Oswego.
Rice, Alfred, Hannibal.
Shaver, Charles W., Constantia.
Snyder, George W., Scriba.
Stockwell, J. K., Oswego.
Thompson, A. L., Sandy Creek.
Todd, John B., Parish.
Tousley, W. Dealton, Holmesville.
Tully, A. M., Oswego.
Wells, Willis M., Oswego Falls.
Whyborn, Charles F., Cleveland.
Wright, Charles F., Sand Bank.

Number of Members, 63.

OTSEGO COUNTY.

OTSEGO COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, third Tuesday in July; semi-annual, third Tuesday in January, at Cooperstown.

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Officers. (*July* 15, 1882.)

H. W. Boorn, President.
H. H. Clapsaddle, Vice-President.
O. W. Peck, Secretary.
L. H. Hills, Treasurer.

Censors.

Delegates to State Medical Society.

E. E. Houghton. A. S. Seeber.

Members.

Bassett, Wilson T., Cooperstown.
Blakely, A. D., Milford.
Blanchard, H. D., Laurens.
Boorn, Henry W., Schenevus.
Case, Meigs, Oneonta.
Case, Samuel H., Oneonta.
Clapsaddle, H. H., Toddsville.
Fitch, J. D., Schuyler's Lake.
Fitch, T. S., East Springfield.
Green, John W., West Laurens.
Halsey, G. L., Unadilla.
Harris, H. T., Laurens.
Hills, E. D., Burlington Flats.
Hills, L. H., Cooperstown.
Houghton, E. E., Schenevus.
Kenyon, D. R., Mount Vision.
Lathrop, Horace, Cooperstown.
Leaning, J. K., Fly Creek.
Leonard, Wm. H., Worcester.
Lough, W. R., Burlington Flats.
McClellan, M. J., Garrattsville.
Martin, J. H., Otego.
Matteson, DeWitt J., Mount Vision.
Merritt, George, Cherry Valley.
Merritt, George L., Cherry Valley.
Moon, John H., East Springfield.
Odell, Evander, Unadilla.
Peck, Ozias W., Oneonta.
Pomeroy, S. G., West Oneonta.
Robinson, Solomon L., Hartwick.
Seeber, A. S., Milford.
Sloan, George A., Westford.
Smith, P. S., Hartwick.
Smithe, Nathan, Edmeston.
Spafford, E. W., Portlandville.
Sterricker, J. W., Roseboom.
Strong, Addison P., Laurens.
Spencer, E. L., Otego.
Swanson, J. W., Springfield Center.
Sweet, J. J., Unadilla.

Number of Members, 40.

Honorary Member.

W. A. Thayer, Cooperstown.

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PUTNAM COUNTY.

PUTNAM COUNTY MEDICAL SOCIETY.

(Organized July 28, 1874.)

MEETINGS—Annual, fourth Tuesday in July; semi-annual, fourth Tuesday in January.

Officers. (*July* 25, 1882.)

George W. Murdock, President.
J. Q. Adams, Vice-President.
N. B. Bayley, Secretary.
Austin La Monte, Treasurer.

Censors.

M. A. Bailey, E. Hebersmith, J. H. Smith

Delegate to State Medical Society.

J. Q. Adams.

Members.

Adams, John Q., Carmel.
Bailey, Joseph H., U. S. A., Kent Cliffs.
Bailey, Matthew A., Carmel.
Bailey, Thomas H., Kent Cliffs.
Bayley, Norman B., Brewster's.
Card, J. Edson, Jr., Mahopac.
Crosby, Edward, Mahopac Falls.
Ely, Addison, Carmel.
Hebersmith, Ernest, Patterson.
Jayne, Walter A., Cold Spring.
La Monte, Austin, Carmel.
Miller, Lewis H., Brewster's.
Murdock, George W., Cold Spring.
Smith, John H., Brewster's.
Turner, Edward B., Mahopac.
Wheeler, Nathan W., Patterson.
Wood, Samuel A., Ludingtonville.
Young, William, Cold Spring.

Number of Members, 18.

Honorary Member.

Henry Pearce, Pawling, N. Y.

QUEENS COUNTY.

QUEENS COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, last Tuesday in May, at Garden City.

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Officers. (*May* 30, 1882.)

W. P. Overton, President.
Walter Lindsay, Vice-President.
C. G. J. Finn, Secretary and Treasurer.

Censors.

P. M Wood, J. H. Bogart, C. H. Ludlum,
W. J. Burnett, E. A. Goodridge.

Delegates to State Medical Society.

J. H. Bogart, William D. Woodend.

Members.

Andrews, John S., East New York.
Altmuller, George, Glen Cove.
Baiseley, R. D., East Rockaway.
Banks, George B., Huntington, Suffolk county.
Barker, Charles H., Jamaica.
Bell, G. W., Farmingdale.
Blasdale, Charles, Jericho.
Bloodgood, Joseph, Flushing.
Bogart, J. H., Roslyn.
Burnett, W. J., Long Island City.
Conway, J. F., Far Rockaway.
Coombs, A. C., Newtown.
Coombs, R. C. F., Woodhaven.
Davidson, Henry H., Vernon Valley.
Davidson, John, Hempstead.
Denton, J. H. B., Freeport.
Denzler, Z. P., Long Island City.
Faller, E. W., Oyster Bay.
Friedel, T. A., Farmingdale.
Finn, C. G. J., Hempstead.
Frye, Peter Y., Oyster Bay.
Goodridge, E. A., Flushing.
Hegeman, F. C., Seaford.
Hammond, G. H., Freeport.
Hayes, H. H., Maspeth.
Hendrickson, S., Brooklyn, Kings Co.
Hitchcock, DeWitt, Long Island City.
Hutcheson, J. A., Pearsall's.
Hutcheson, R. W., Rockville Centre.
Lindsay, Walter, Huntington, Suffolk Co.
Ludlum, C. H., Hempstead.
Merres, P., Winfield.
Merritt, J. K., Flushing.
Mueller, E., College Point.
Nadal, T. W., Jamaica.
Ordronaux, John, Roslyn.
Overton, W. P., Cold Spring Harbor, Suffolk County.
Porter, D. R., Manhasset.
Rave, E., Hicksville.
Rhame, William, Bellmore.
Rodman, W., Huntington, Suffolk Co.
Seabury, John, Jamaica.
Seaman, R. F. B., Glen Cove.
Seaman, Richard S., Glen Cove.
Skinner, E. D., Mineola.
Smallwood, S. B., Astoria.
Snedeker, Morris, Hempstead.
Taylor, W. R., Astoria.
Townsend, James C., Glen Cove.
Trask, James D., Astoria.
Trask, James D., Jr., Astoria.
Van Deventer, H. B., Manhasset.
Van Zandt, R. C., Oyster Bay.
Webb, Edwin, Hempstead.
Whitney, Darling B., East Norwich.
Wickham, F., Corona.
Wood, Philip M., Jamaica.
Wood, William D., Jamaica.
Woodend, W. D., Huntington, Suffolk Co.
Wright, F. A., Glen Cove.

Number of Members, 60.

Honorary Members.

Jos. C. Hutchison, Brooklyn. Lewis A. Sayre, New York.

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RENSSELAER COUNTY.

RENSSELAER COUNTY MEDICAL SOCIETY.

(Organized 1806.)

MEETINGS—Second Tuesday in January; stated, second Tuesday of each month, except in June, July and August.

Officers. (*January* 10, 1882.)

James C. Hutchison, President.
James McChesney, Vice-President.
C. C. Schuyler, Secretary.
C. H. Burbeck, Treasurer.
O. F. Kinloch, Librarian.

Censors.

R. H. Ward, Mahlon Felter, Daniel D. Bucklin,
Robert Thomson, Caroline S. Pease.

Delegates to State Medical Society.

R. D. Traver, William S. Cooper, Chas. S. Burbeck.

Committee on Hygiene.

M. H. Burton, D. D. Bucklin, W. H. Nichols,
E. N. Beale, P. H. Neher, F. B. Parmele,
S. H. Skinner.

Members.

Akin, Washington, 12 Fourth street.*
Allen, Amos, Grafton Centre.
Allen, C. S., Greenbush.
Ballou, N. H., Lansingburgh.
Baynes, William T., Jay cor. North Second.
Beale, E. N., Schaghticoke.
Bonesteel, Wm. N., Mill, Nail Factory.
Bontecou, R. B., Broadway cor. Fourth street.
Bucklin, D. D., 575 State st., Lansingburgh.
Burbeck, Charles H., 22 Second street.
Burton, M. H., 75 Fourth street.
Butts, Elihu, Schaghticoke.
Camp, N. H., 111 Fourth street.
Capron, E. W., 543 State st., Lansingburgh.
Carmichael, E. W., Sandlake.
Cipperly, John H., Marshall Infirmary.
Cooper, William C., 81 Third street.
Cooper, Wm. L., Albia, (Troy.)
Cooper, Wm. S., 81 Third street.
Crombie, Walter C., Schaghticoke.
Davis, E. H., 574 State st., Lansingburgh.

* Where no town is mentioned, Troy is to be understood.

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Felter, Mahlon, 106 Fifth street.
Fennelly, P. E., 70½ North Second st.
Ferguson, E. D., 2 Union place.
Fisk, E. J., 75 Third street.
Flint, John J., 162 Congress street.
Harvie, J. B., 577 First street.
Heimstreet, T. B., 132 Second street.
Herrick, Clinton B., 75 Third street.
Hill, A. D., Greenbush.
Hutchison, J. C., Ferry and Third st.
Kinloch, Osborn F., cor. State street.
Lomax, J. D., Marshall Infirmary.
Magee, Daniel, 121 Fourth street.
Magee, Hugh, 115 Fourth street.
Magee, John, 597 State st., Lansingburgh.
Mason, Wm. P., 7 Flint street.
McChesney, James, Pawling avenue.
McLean, LeRoy, 21 First street.
McTammany, W. F., 536 Fourth street.
Neher, P. H., Nassau.
Nichols, C. E., 57 Fourth street.
Nichols, Wm. H., West Sandlake.
O'Connor, Jeremiah, Troy Hospital.
Parmele, F. B., 77 Broadway, Greenbush.
Pease, Caroline S., 66 Fourth st.
Reynolds, Charles N., Garfield.
Rousseau, Zotique, 108 Second street.
St. John, T. L., Centre Brunswick.
Schuyler, C. C., 21 First street.
Seymour, W. P., 105 Third street.
Seymour, W. W., 105 Third street.
Skinner, S. A., Hoosick Falls.
Thompson, J. A., Valley Falls.
Thompson, Robert, 339 Congress st.
Traver, R. D., 8 Waverly place.
Van Wert, Harry, Raymertown.
Ward, R. H., 53 Fourth strreet.
Whiton, H. B., 53 Fourth street.
Willis, A. B., Johnsonville.
Winship, C. A., Eagle Mills.

Number of Members, 62.

RICHMOND COUNTY.

RICHMOND COUNTY MEDICAL SOCIETY.

(Organized January 17th, 1855.)

MEETINGS—Annual, first Wednesday in July; quarterly, first Wednesday in October, January and April, at the Seaman's Retreat Hospital.

Officers. (*July* 12, 1882.)

C. Henry King, President.
J. J. VanRensselaer, Vice-President.
T. J. Thompson, Secretary and Treasurer.

Censors.

Delegate to State Medical Society.

Isaac Lea.

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Members.

Ambrose, J. K., Clifton.
Anderson, Frank, Stapleton.
Anderson, Wm. C., Stapleton.
Andrews, T. A., Stapleton.
Avery, Alice, Nursery and Child's Hospital, West New Brighton.
Beyer, T., Stapleton.
Carroll, A. L., New Brighton.
Clark, Ephraim, Richmond.
Clark, F. E., West New Brighton.
Clark, James G., West New Brighton.
Coonley, E. D., Mariner's Harbor.
Feeney, John L., Stapleton.
Golder, R. H., Rossville.
Harrison, H. R., Port Richmond.
Hubbard, G. C., Tottenville.
Johnston, F. U., Stapleton.
King, C. Henry, Stapleton.
Lea, Isaac, Stapleton.
Lukens, Anna, West New Brighton.
Martindale, F. E., Port Richmond.
Millspaugh, Isaac L., Richmond.
Mundy, Edward C., Port Richmond.
Thompson, H., Clifton.
Thompson, T. J., Stapleton.
VanRensselaer, J. J., New Brighton.
Walser, Theodore, New Brighton.
Walser, W. C., Port Richmond.
Westfall, E. J., Tottenville.

Number of Members, 28.

Honorary Member.

S. O. Vander Poel, New York, N. Y.

ROCKLAND COUNTY.

MEDICAL SOCIETY OF ROCKLAND COUNTY.

(Re-organized May 18, 1850.)

MEETINGS—Annual, last Tuesday in May; semi-annual, last Tuesday in October.

Officers. (*May* 30, 1882.)

Albert O. Bogert, President.
E. B. Laird, Vice-President.
William Govan, Secretary.
Jacob S. Wigton, Treasurer.
I. C. Haring, Librarian.

Censors.

D. F. Wimple, H. H. House, J. O. Polhemus.

Delegate to State Medical Society.

E. H. Maynard.

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Members.

Blauvelt, Garrett F., Nyack.
Bogert, Albert O., Pearl River.
Bogert, Rykman D., Pearl River.
Davison, Benjamin, Nyack.
Govan, William, Stony Point.
Haring, Isaac C., Mont Moor.
Hopson, James A., Piermont.
House, H. H., Rockland Lake.
Humphrey, C. S., Spring Valley.
Laird, Eugene B., Haverstraw.
Lake, Daniel, Spring Valley.
Masten, C. H., Sparkill.
Maynard, E. H., Nyack.
Polhemus, J. O., Nyack.
Stephens, James J., Tappantown.
Ten Eyck, C. H., Nyack.
Van Houten, N. R., New City.
Wigton, Jacob S., Spring Valley.
Wimple, Daniel F., Haverstraw.
Wood, Theodore C., Haverstraw.

Number of Members, 20.

Honorary Member.

Isaac Wells, New York, N. Y.

ST. LAWRENCE COUNTY.

ST. LAWRENCE COUNTY MEDICAL SOCIETY.

(Re-organized in 1864.)

MEETINGS—Annual, second Tuesday in January; semi-annual, second Tuesday in June, at the place appointed by a vote of the annual meeting.

(*Officers. January* 10, 1882.)

G. G. Monroe, President.
D. F. Dayton, Vice-President.
L. E. Felton, Secretary.
E. H. Bridges, Treasurer.

Censors.

——— ———. ——— ———. ——— ———.

Delegates to State Medical Society.

J. E. Colburn, G. G. Monroe, O. J. Hutchins.

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Members.

Alguire, S. O., Cornwall, Ontario, Canada.
Ames, Alvin, Canton.
Anderson, F. A., Massena.
Baker, L. B., Russell.
Bayley, C. W., Rensselaer Falls.
Boland, H. A., Lawrenceville.
Bartholomew, C. C., Ogdensburgh.
Bower, Silas J., Waddington.
Brewer, F. H., Madrid.
Bridges, E. H., Ogdensburgh.
Bridges, Z. B., Ogdensburgh.
Briggs, Myron D., Parishville.
Carpenter, H. H., Lawrenceville.
Chagnon, L. P., Brasher Falls.
Colburn, J. E., Colton.
Cole, G. F., Potsdam.
Conkey, J. S., Canton.
Cook, G. R., Louisville.
Cruikshank, W. H., Lisbon.
Dayton, D. F., Hopkinton.
Drury, Benjamin F., Gouverneur.
Dunton, H. E., North Lawrence.
Dunton, Thomas, Stockholm.
Felton, L. E., Potsdam.
Flood, J. Q., Hopkinton.
Garvin, James, Morristown.
Geare, Fred., Ogdensburgh.
Goodenough, A. B., Edwards.
Gregor, A. K., Hammond.
Griffin, L. M., Rossie.
Grinnall, J. H., Massena.
Hammond, H. T., Chase's Mills.
Hassir, J. R., Gouverneur.
Hawley, Charles B., Richville.
Holmes, G. H., Briar Hill.
Howard, J. S., Russell.
Hutchins, O. J., Depeyster.
Hutchins E. A., North Lawrence.
Larkin, A. M., Norwood.
Loren, M. M., Nicholville.
Manly, B. S., Potsdam.
McFadden, Orrell, Massena.
Merrill, S., Parishville.
Monroe, George C., Crary's Mills.
Moore, W. L., South Colton.
Morgan, Albert L., Lisbon Centre.
Morris, Robert, Ogdensburgh.
Parker, M. S., Parishville.
Parmelee, S. L., Watertown, Jefferson County.
Phillips, James A., Morristown.
Pierce, C., Madrid.
Pierce, John, Adams, Jefferson County.
Reynolds, G. W., Madrid.
Reynolds, Jesse, Potsdam.
Russell, George M., Potsdam.
Samburn, Louis, Heuvelton.
Selee, D. M., Edwardsville.
Seymour, E. G., Hermon.
Sherman, B. F., Ogdensburgh.
Sherman, F. R., Hammond.
Sherman, R. R., Canton.
Smith, H. D., Nicholville.
Smith, Moses E., South Colton.
Smith, W. E., Brasher Falls.
Sprague, L. T., Brasher.
Thomson, A. N., Norfolk.
Turner, A. H., Morley.
Walsh, D. C., Madrid.
Whitney, Ephraim, Massena.
Wilson, C. M., Gouverneur.

Number of Members, 69.

SARATOGA COUNTY.

SARATOGA COUNTY MEDICAL SOCIETY.

(Organized in July, 1807.)

MEETINGS—Annual, first Tuesday in June; semi-annual, first Tuesday in December.

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Officers. (*June* 6, 1882.)

R. C. McEwen, President.
R. J. Murray, Vice-President.
W. H. Hodgman, Secretary and Treasurer.

Censors.

F. M. Boyce, C. E. Creal, W. H. Hall, T. B. Reynolds, I. G. Johnson,

Delegates to State Medical Society.

C. S. Grant, T. E. Parkman.

Members.

Austin, J. M., New York.
Babcock, M. N., Saratoga Springs.
Ballou, N. H., Mechanicsville.
Bedell, C. C., Saratoga Springs.
Boughton, C., Waterford.
Boyce, F. M., Saratoga Springs.
Bull, C. D., Stillwater.
Burger, A. B., Gansevoort.
Burrus, D. R., Burnt Hills.
Cooper, H. C., Clifton Park.
Creal, C. E., Saratoga Springs.
Ensign, C., Mechanicsville.
Gow, Frank, Schuylerville.
Grant, C. S., Saratoga Springs.
Gusteen, C. A., Gansevoort.
Hall, W. H., Saratoga Springs.
Hammond, H. L., Saratoga Springs.
Heartt, P., Waterford.
Hodgman, W. H., Saratoga Springs.
Houghton, N. M., Corinth.
Johnson, I. G., Greenfield Centre.
Kniskern, A. C., Crescent.
Lewis, M., Ballston Spa.
McEwen, R. C., Saratoga Springs.
Moore, John, Bacon Hill.
Moore, L., Ballston Spa.
Murray, B. J., Wilton.
Noxon, B. W., Ballston Spa.
Parkman, T. E., Rock City Falls.
Preston, C., Galway.
Preston, J. R., Schuylerville.
Putnam, L. B., Saratoga Springs.
Reynolds, T. B., Saratoga Springs.
Rowell, S. N., Dunning Street.
Sherman, F. A., Ballston Spa.
Van Vranken, G. D., Saratoga Springs.
Van Woert, Abram, Fisher's Ferry.
Willard, L. M., Saratoga Springs.
Young, F. A., West Charlton.

Number of Members, 39.

SCHENECTADY COUNTY.

THE SCHENECTADY COUNTY MEDICAL SOCIETY.

(Organized January 19, 1869.)

MEETINGS—Annual, second Tuesday in January; semi-annual, second Tuesday in June.

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Officers. (*January* 10, 1882.)

G. W. Van Voast, President.
M. G. Planck, Vice-President.
J. L. Schoolcraft, Secretary.
A. T. Veeder, Treasurer.

Censors.

A. Ennis, J. Reagles, H. C. Van Zandt.

Delegate to State Medical Society.

Maurice Perkins.

Members.

Abrams, A. E., Duanesburgh.
Brumagem, Peter, Mariaville.
Cheeseman, N. S., Scotia.
Daggett, N. G., Schenectady.
De La Mater, S. G., Duanesburgh.
Duryee, C. C., Schenectady.
Ellwood, L., Schenectady.
Ennis, A., Pattersonville.
Featherstonhaugh, Thomas, Albany.
Fuller, Robert, Schenectady.
Hammer, Charles, Schenectady.
Hull, H. V., Schenectady.
McDonald, Geo. F., Schenectady.
Mackay, John P., Schenectady.
Mynderse, B. A., Schenectady.
Pearson, William L., Schenectady.
Perkins, Maurice, Schenectady.
Planck, M. G., Schenectady.
Reagles, James, Schenectady.
Roach, Paul, Quaker Street.
Rowe, George, Braman's Corners.
Schoolcraft, John, Schenectady.
Steinführer, G. A. F., Schenectady.
Van Epps, E. P., Schenectady.
Van Voast, G. W., Schenectady.
Van Zandt, H. C., Schenectady.
Veeder, A. T., Schenectady.
Whitehorne, E. E., Schenectady.
Young, Edwin, West Glenville.
Young, Frank A., West Carlton, Saratoga County.

Number of Members, 30.

SCHOHARIE COUNTY.

SCHOHARIE COUNTY MEDICAL SOCIETY.

(Organized, 1803; re-organized, 1857.)

MEETINGS—Annual, first Tuesday in June; semi-annual, first Tuesday in October.

Officers. (*June* 6, 1882.)

E. O. Bruce, President.
Joseph H. Brown, Vice-President.
H. F. Kingsley, Secretary.
David Frazier, Treasurer.

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Censors.

Lemuel Cross, C. K. Frazier, H. Sperbeck
W. S. Layman, G. A. Williams.

Delegate to State Medical Society.

W. S. Layman.

Committee on Hygiene.

E. O. Bruce, H. F. Kingsley, C. S. Burnett, D. M. Leonard.

Members.

Beard, F. P., Summit.
Brown, J. R., Seward.
Bruce, E. O., Hyndsville.
Burgett, W. W., Fultonham.
Burnett, C. S., Blenheim.
Cross, L., Cobleskill.
Dickinson, C., Seward.
Dockstader. J. A., Sharon Springs.
Frazier, C. K., Cobleskill.
Frazier, D., Cobleskill.
Green, J., Sharon Springs.
Hand, J. T., Sharon Springs.
Havens, C. H., Summit.
Hotaling, John, Gallupville.
Jackson, George, Hunter's Land.
Kingsley, H. F., Schoharie.
Lawyer, Ezra, Cobleskill.
Lawyer, James, Middleburgh.
Layman, W. S., Schoharie.
Leonard, D. M., Broome Centre.
Lowell. I. S , Argusville.
Marsh, Edward, Sloansville.
McCullock, Charles, Central Bridge.
Norwood, D., Esperance.
Norwood, J. E., Schoharie.
Roscoe, J. R. Carlisle.
Scott, J. S., Grosvenor's Corners.
Sperbeck, H., Charlotteville.
Terwilliget, B. W., Carlisle.
Tibbitts, James M., Eminence.
Van Alstyne, S. M., Richmondville.
Van Alstyne, Thos. B., Richmondville.
Van Wagner, G. H., Sloansville.
Wells, Henry D., Middleburgh.
Williams, Geo. A., Sharon Springs.

Number of Members 35.

SCHUYLER COUNTY.

SCHUYLER COUNTY MEDICAL SOCIETY.

(Organized December 29, 1857.)

MEETINGS—Annual, second Tuesday in January; semi-annual, second Tuesday in July.

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Officers. (*January* 10, 1882.)

H. P. Stillwell, President.
A. L. Behan, Vice-President.
George M. Post. Secretary.

Censors. (1881.)

S. B. Allen, E. H. Davis, W. H. Heist,
G. M. Post, J. W. Thompson.

Delegate to State Medical Society.

S. B. Allen.

Members.

Allen, S. B., Burdette.
Barnes, J. F., Watkins.
Beach, Wm. H., Catharine.
Behan, A. L., Reading.
Bell, R., Monterey.
Bennett, M. L., Watkins.
Birge, D. W., Peach Orchard.
Boyce, John, Weston.
Davis, E. H., Watkins.
Fish, H. H., Mecklenburg.
Fish, William H., Mecklenburg.
Glass, J. H , Watkins.
Hawes, M. D., North Hector.
Hedden, John H., Orange.
Heist, W. H., Townsend.
Hughes, L. H., Watkins.
Layler, George P., Townsend.
Nivison, N., Burdette.
Post, George M., Havana.
Seaman, H. D., Beaver Dams.
Sherwood, O. B., Cayutaville.
Smelzer, B. F., Havana.
Smith, G. O., Odessa.
Stillwell, H. P., Burdette.
Thompson, J. W., Watkins.
White, L. T., Alpine.

Number of Members, 26.

SENECA COUNTY.

SENECA COUNTY MEDICAL SOCIETY.

(Re-organized August 1, 1865.)

MEETINGS—Annual, second Wednesday in July; semi-annual, second Wednesday in January.

Officers. (*July* 12, 1882.)

D. F. Everts, President.
Frank H. Flood, Vice-President.
E. J. Schoonmaker, Secretary.
E. Lester, Treasurer.

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Censors.

J. C. Carson, Richard Dey, Wm. W. Wheeler.

Delegate to State Medical Society.

Elias Lester.

Committee on Hygiene. (1881.)

Wm. W. Wheeler. E. J. Schoonmaker. J. C. Carson

Members.

Alleman, A. J., McDougall's.
Allison, H. E., Willard.
Bellows, George A., Waterloo.
Carson, J. C., Willard.
Chapin, J. B., Willard.
Denniston, J., Ovid.
Dey, Richard, Romulus.
Dunn, J., Lodi.
Emmons, Alfred, Seneca Falls.
Everts, D. F., Romulus.
Flickinger, John, Trumansburg, Tompkins county.
Flood, Frank H., Fayette.
Flood, James, Geneva, Ontario county.
Gould, Lewis A., Ovid.
Hopkins, H. G., Willard,
Keyes, Charles I., Lodi.
Lamoreaux, E. W., Willard.
Lester, Elias. Seneca Falls.
Rhodes. S. G., Seneca Falls.
Purdy, H. J., Seneca Falls.
Schoonmaker, E. J., Magee's Corners.
Seaman, Frank, Seneca Falls.
Sears, Alfred, Townsendville.
Sternberg, J. H., Waterloo.
Seelye, Frank B., Ovid.
Swaby, Wm. A., Seneca Falls.
Townsend, John M., Townsendville.
Welles, S. R., Waterloo.
Wheeler, Wm. W., Farmer Village.
Wise, P. M., Willard.

Number of Members, 30.

STEUBEN COUNTY.

STEUBEN COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in June; semi-annual, second Tuesday in January.

Officers. (*June* 13, 1882.)

H. M. Bourne, President.
M. D. Ellison, Vice-President.
J. S. Dolson, Secretary and Treasurer.

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Censors. (1880.)

Delegates to State Medical Society.

M. J. Baker, Eli Allison.

Members.

Ainsworth, H. R., Addison.
Addison, Eli, Wayne.
Argue, Henry A., Corning.
Babcock, M. T., Hammondsport.
Baker, Milton J., Hornellsville.
Bennett, Charles H., Bath.
Bennett, E., Prattsburgh.
Bennett, J. A., Prattsburgh.
Bourne, H. M., Campbelltown.
Brown, Wm. B., Bath.
Brown, J. W., Addison.
Burlison, T. O., Pultney.
Case, A. B., Howard.
Case, D. L., Howard.
Case, G. F., Pultney.
Christie, Amelia A., Hornellsville.
Collier, M. S., Savona.
Cruttenden, A. H., Path.
Cridler, D. F., Hornellsville.
Dolson, Mrs. A. A., Bath.
Dolson, J. F., Bath.
Dudley, A. B., Painted Post.
Ellison, M. D., Canisteo.
Fowler, T. B., Cohocton.
Gallagher, G. S., Naples, Ontario Co.
Goff, I. L., Cohocton.
Graves, J. B., Corning.
Green, W. T., Hornellsville.
Green, W. W., Prattsburgh.
Hall, S. H., Blood's Depot.
Hallenbeck, G. G., Corning.
Herrington, N. M., Corning.
Hubbard, G. C., Hornellsville.
Kasson, Ambrose, Bath.
Kendall, Arthur, Corning.
Lockwood, F. M., Bradford.
McNett, J. H., Hornellsville.
May, H. C., Corning.
Mills, A. F., Corning.
Mitchell, J. D., Savona.
Mitchell, John, Addison.
Mitchell, Samuel, Hornellsville.
Overhiser, E. A., Campbelltown.
Parkhill, C. S., Hornellsville.
Parkhill, R. F., Howard.
Patterson, C., Avoca.
Payne, A. C., Corning.
Perry, N. M., Troupsburgh.
Picket, Benjamin, Canisteo.
Pierce, Byron, Cooper's Plains.
Robbins, A. D., Corning.
Robinson, J. W., Hornellsville.
Santee, W. E., Canisteo.
Seeley, Agnes, Mrs., Bath.
elover, J. R., Bath.
Shannon, Thomas, Corning.
Shattuck, E., Hornellsville.
Sheffield, W. H., Jasper.
Smith, I. P., Bath.
Smith, J. B., Hornby.
Smith, W. W., Avoca.
Stewart, Warren, Savona.
Stoddard, P. K., Prattsburgh.
Tallmage, M. A., Bradford.
Terry, Marsena, Painted Post.
Trumbull, J. H., Hornellsville.
Winne, E., Haskinville.
Wylie, Ferand, Bath.

Number of Members, 68.

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SUFFOLK COUNTY.

THE MEDICAL SOCIETY OF SUFFOLK COUNTY.

(Organized July 22, 1806.

MEETINGS.—Annual, in April, at Riverhead, subsequent to adjournment of court; semi-annual, in October, on day and place directed at the April meeting.

Officers. (*April*, 1882.)

W. W. Hewlett, President
H. P. Terry, Vice-President.
E. Thayer, Secretary.
B. D. Skinner, Treasurer.
J. H. Benjamin, Librarian.

Censors.

E. F. Preston, E. H. Hamill, B. D. Skinner.

Delegate to State Medical Society.

E. F. Preston.

Members.

Baker, James I., Yaphank.
Benjamin, John H., Riverhead.
Benjamin, R. H., Riverhead.
Chapel, S. W., Patchogue.
Conkling, George H., East Norwich, Queens county.
Fanning, George, Stony Brook.
Hamill, Edward H., Bay Shore.
Holden, Edward, Holbrook.
Hewlett, W. W., Babylon.
Ives, Hugh M., Sayville.
Jarvis, E. P., Centre Moriches.
Langdon, Henry A., Greenport.
Luce, Abraham B., Riverhead.
Miles, Clarence C., Greenport.
Preston, Edwin F., Amityville.
Preston, William S., Patchogue.
Provost, Wm. Y., Babylon.
Robinson, George A., Sayville.
Skinner, Barton D., Greenport.
Terry, H. P., Cutchogue.
Thayer, F., Riverhead.
Thompson, Abram G., Islip.
Vandewater, A. L., Bay Shore.
Wright, Levi D., Bridgewater.

Number of Members, 24.

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SULLIVAN COUNTY.

SULLIVAN COUNTY MEDICAL SOCIETY.

(Organized October 3, 1809.)

MEETINGS—Annual, first Wednesday after the second Tuesday in June; semi-annual, first Wednesday in October.

Officers. (*June* 14, 1882.)

W. W. Murphy, President.
F. A. McWilliams, Vice-President.
J. R. Robinson, Secretary.
L. S. Linson, Treasurer.

Delegate to State Medical Society.

W. S. Webster.

Committee on Hygiene.

R. C. Tuttle. Wm. Brand. Thomas Bennett.

Members.

Appley, W. W., Cochecton.
Beakes, George M., Bloomingburgh.
Bennett, T. W., Jeffersonville.
Brand, Wm., Jeffersonville.
Crocker, E., Narrowsburgh.
DeKay, J. H., Parksville.
Gaudenier, W. J., Bloomingburgh.
Gillespie, A. A., Bethel.
Johnson, N. B., Barryville.
Johnson, Chas. G., Barryville.
Kemp, S. A., Callacoon Depot.
Lathrop, G. H., Wurtsboro.
Linson, L. S., Stevensville.
McWilliams, F. A., Monticello.
Maltby, W. A., Jeffersonville.
Murphy, W. W., Liberty.
Perry, G. F., Woodbourne.
Purdy, I., Mongaup Valley.
Quinlan, E. F., Monticello.
Robinson, J. R. Woodbourne.
Russell, E. M., Grahamsville.
Sloan, R. H., Bethel.
Tuttle, R. C., Rockland.
Webster, W. S., Liberty.
Wheeler, F. T., Rockland.

Number of Members, 25.

TIOGA COUNTY.

TIOGA COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in January; first quarterly, second Tuesday in April; semi-annual, second Tuesday in July; second quarterly, second Tuesday in October.

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Officers. (*January* 10, 1882.)

R. S. Harnden, President.
C. E. Hollenbeck, Vice-President.
W. L. Ayer, Secretary.
R. W. Eastman, Treasurer.

Censors.

Delegate to State Medical Society.

George P. Cady.

Members.

Allen, James, Jr., Richford.
Allen, L. H., Owego.
Ayer, W. L., Owego.
Barrett, James, Owego.
Beach, G. W., Apalachin.
Benton, J. B., Tioga Centre.
Bliss, T. F., Spencer.
Burr, W. J., Newark Valley.
Buttles, W. R., Candor.
Cady, G. P., Nichols.
Dixon, J. C., Candor.
Eastman, C. C., Owego.
Eastman, N. H., Owego,
Eastman, R., Berkshire.
Farnham, L. D., Candor.
Fisher, William H., Spencer.
Harnden, D. D., Waverly.
Harnden, R. S., Waverly.
Heaton, C. R., Owego.
Hollenbeck, C. E., Halsey Valley.
Johnson, W. E., Waverly.
Lewis, J. W., Apalachin.
Magee, J. B., Candor.
Metcalf, A. E., Owego.
Miller, D. H., Candor.
Moore, R. E., Owego.
Nicol, W. R., Waverly.
Pease, E. E., Nichols.
Phelps, E. B., Owego.
Rodgers, C. R., Newark Valley.
Rood, M. G., Berkshire.
Starkey, J. C., Owego.
Stiles, C. L., Owego.
Stone, E. J., Waverly.
Tanner, J. H., Spencer.
Tappan, R. C., Newark Valley.
Tinkham, J. H., United States Army.
Vaughn, Charles, Smithborough.
Vosburg, H. P., Halsey Valley.

Number of Members, 39.

TOMPKINS COUNTY.

TOMPKINS COUNTY MEDICAL SOCIETY.

(Organized about 1815; re-organized October, 1862.)

MEETINGS—Annual, third Wednesday in June; semi-annual, third Wednesday in December.

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Officers. (*June* 21, 1882.)

J. R. Gregory, President.
E. R. Barney, Vice-President.
S. P. Sackett, Secretary.
S. H. Peck, Treasurer and Librarian.

Censors.

E. R. Barney, G. M. Beckwith, R. D. Smith,
C. C. Cook, J. A. Lewis.

Delegate to State Medical Society.

J. E. Beers.

Committee on Hygiene.

A. A. Breneman, W. Newcomb, A. J. White.

Members.

Barney, E. R., Ithaca.
Beach, Judson, Ithaca.
Beckwith, G. M., Ithaca.
Beers, J. E., Danby.
Boyce, C. E., McLean.
Briggs, Isaac S., Dryden.
Brown, J. W., Ithaca.
Cook, C. C., Newfield.
Demund, M. A., West Danby.
Dunning, Benjamin, Trumansburg.
Farrington, J. M., Trumansburg.
Fitch, William, Dryden.
Gallagher, W. C., Slaterville.
Gibbs, J. S., Groton.
Gregory, J. R.. Ithaca.
Kyle, E. C., Enfield Centre.
Lanning, Richard, McLean.
Lewis, J. A., Ithaca.
McCann, Wm. A., Newfield.
Montgomery, J. J., Dryden.
Newcomb, W., Ithaca.
Northrup, J. A., Ithaca.
Peck, S. H.. Ithaca.
Sackett, S. P., Ithaca.
Sanford, Mary A., Ithaca.
Sebring, S. A., Newfield.
Smith, Reuben D., Jacksonville.
White, A. J., Trumbull's Corners.
Wilder, Burt G., Ithaca.
Winslow, J., Ithaca.

Number of Members, 30.

Honorary Members.

Prof. A. A. Breneman, Ithaca.
Prof. Z. H. Potter, Ithaca.
Prof. James Law, Ithaca.
Prof. S. H. Gage, Ithaca.

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ULSTER COUNTY.

MEDICAL SOCIETY OF COUNTY OF ULSTER.

MEETINGS—Annual, first Tuesday of June, at Kingston; quarterly, second Tuesday in September, December and March, at such place as the Comitia Minora may determine.

(*Officers. June* 6, 1882.)

E. D. Chipman, President.
Herman Craft, Vice-President.
George C. Smith, Recording Secretary.
Rufus Crawford, Corresponding Secretary.
Josiah Hasbrouck, Treasurer.

Censors.

Thomas S. Dawes, P. D. B. Hoornbeck, G. S. La Morse,
E. McKenzie, L. B. Smith.

Delegates to State Medical Society.

E. McKenzie, S. Schoonmaker, H. R. Winter.

Members.

Bevier, Benjamin R., Napanock.
Carhart, E. W., Milton.
Chipman, E. D., Saugerties.
Cooke, George W., Kingston.
Covel, C. C., Kingston.
Craft, H., Stone Ridge.
Crawford, Rufus, Saugerties P. O., Smith's Landing, Greene County.
Dart, Isaac C., Highland.
Dawes, T. S., Saugerties.
Decker, J. A., Ulster Park.
De Witt, William B., High Falls.
Deyo, C. W., New Paltz.
Finch, P. Ellenville.
Frakir, J. R., Milton.
Gedney, W. H., Milton.
Griffin, J. M., West Hurley.
Hasbrouck, C. V., Rosendale.
Hasbrouck, Josiah, Port Ewen.
Hoornbeck, P. D. B., Wawarsing.
Hoornbeck, S. E. D., Kerhonkson.
Huhne, Augustus, Rondout.
Hull, A. C., Olive.
Keator, T. O., Accord.
La Moree, G. S., Highland.
Loughran, E. H., Kingston.
Loughran, R., Kingston.
McKenzie, E., Port Ewen.
Montgomery, C. T., Glasco.
Murphy, R. M., Rondout.
Nelson, George W., Shandaken.
Otis, A., Ellenville.
Palmer, A. H., Marlborough.
Perkins, E. K., Rondout.
Schoonmaker, S., Rosendale.
Scoresby, W. F., Ellenville.
Shaffer, S. N., Wilbur.
Smith, G. C., Rondout.
Smith, L. B., Woodstock.
Van Hoevenburgh, H., Kingston.
Wheeler, M., Esopus.

Number of Members, 40.

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Honorary Members.

G. A. Hawley, Guatemala, South America.

Robert Newman, New York, N. Y.
George F. Shrady, New York, N. Y.

WARREN COUNTY.

WARREN COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in June, at Lake George; semi-annual, when and where the Society determine.

Officers. (*June* 13, 1882.)

Louis Charette, President.
F. E Aldrich, Vice-President.
F. B. Streeter, Secretary.
F. L. R. Chapin, Treasurer.

Delegate to State Medical Society.

D. B. Howard.

Members.

Adamson, W. R., Lake George.
Aldrich, F. E., Chestertown.
Aldrich, G. H., Stony Creek.
Aldrich, T. E., Athol.
Aldrich, William D., Warrensburgh.
Aldrich, W. W., Weavertown.
Amedem, A. O., Glens Falls.
Chapin, F. L. R., Glens Falls.
Charette, L., Warrensburgh.
Coyle, E. S., Chestertown.
Eddy, R. J., Glens Falls.
Ferguson, James, Glens Falls.
Howard, D. B., Warrensburgh.
Howard, E. W., Warrensburgh.
Loggins, C. J., Chestertown.
Mallory, A., Chestertown.
Martine, G. R., Weavertown.
Murray, S. J., Glens Falls.
Peck, M. R., Glens Falls.
Robinson, W. C., Chestertown.
Robinson, W. S., Bolton.
Streeter, Buel G., Glens Falls.
Streeter, Fred. B., Glens Falls.
Wall, J. C., Olmstedville, Essex county.
Washburne, J. B., Lake George.
Weston, A., Glens Falls.

Number of Members, 26.

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WASHINGTON COUNTY.

MEDICAL SOCIETY OF THE COUNTY OF WASHINGTON.

(Organized July 1, 1806.)

MEETINGS—Annual, last Tuesday in June at such place within the county as the Society shall designate.

Officers. (*June* 27, 1882.)

A. M. Young, President.
J. Millington, Vice-President.
G. B. Murray, Secretary and Treasurer.

Censors.

A. W. Tupper, T. C. Wallace, J. Lambert.

Delegates to State Medical Society.

John Lambert, T. C. Wallace.

Members.

Baldridge, J., Shushan.
Carpenter, Frank H., West Rupert.
Cipperly, J., Middle Falls.
Clark, E. G., Sandy Hill.
Cooley, James S., Sandy Hill.
Flint, J. J., Fort Edward.
Gibbs, T. Z., Fort Ann.
Gray, H., Greenwich.
Griffin, Albert C., Fort Miller.
Hebert, P. Z., Whitehall.
Hewitt, A., Fort Edward.
Hinds, T. D., Salem.
Holcomb, B. R., Whitehall.
Irwine, S. B., West Hebron.
Keefer, Charles W., Fort Miller.
Ketchum, B. F., Cambridge.
Knowlson, J., Middle Granville.
Lambert, J., Salem.
Long, A. J., Whitehall.
Madison, J. H., West Hebron.
Madison, W. B., West Hebron.
Maynard, W. B., Salem.
McLaurie, C. M., Salem.
McNeil, J. S., Argyle.
Millington, J., East Greenwich.
Munroe, I. T., Granville.
Murray, G. B., Greenwich.
Nelson, T. L., Granville.
Perry, A., South Granville.
Pierce, D. T., Argyle.
Renois, W., Whitehall.
Schermerhorn, E., Buskirk's Bridge.
Senten, B. C., Whitehall.
Still, J, C., Argyle.
Tenney, W. A., Granville.
Tupper, A. W., North Granville.
Wallace, T. C., Cambridge.
Whitcomb, G. H., Greenwich.
Young, A. M., Salem.

Number of Members, 39

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WAYNE COUNTY.

WAYNE COUNTY MEDICAL SOCIETY.

(Organized June 2, 1823.)

MEETINGS—Annual, second Tuesday in July, semi-annual, second Tuesday in October.

Officers. (*July* 11, 1882.)

C. G. Pomeroy, President.
James W. Putnam, Vice-President.
Jason Parker, Secretary.
Darwin Colvin, Treasurer.

Censors.

E. W. Bottum, S. Briggs, L. D. Trowbridge,
Jason Parker, J. W. Putnam.

Delegates to State Medical Society.

Jason Parker. Alexander Sayres.

Members.

Arnold, J. N., Clyde.
Besley, J. M., Palmyra.
Babcock, H. E., Marion.
Bottum, E. W., Lyons.
Bradshaw, J. E., Rose.
Brandt, J. W., Ontario.
Briggs, Solon, Newark.
Briggs, Mrs. J. S., Newark.
Burr, H N., Palmyra,
Colvin, Darwin, Clyde.
Cooke, E. H., Lyons.
Crandall, L. A., Fairville.
Gaylord, L. M., Sodus.
Godfrey, W. L., Williamson.
Greene, W. H., Wolcott.
Hall, Mrs. C. C., Lyons.
Horton, D. B., Red Creek.
Ingraham, Samuel, Palmyra.
Kingman, C. M., Palmyra.
Lamont, John C., Sodus.
Landon, N. E., Newark.
Negus, M. W. T., South Sodus.
Nutten, W. F., Newark.
Parker, Jason, Clyde.
Pascoe, F. M., Red Creek.
Pomeroy, C. G., Newark.
Putnam, James W., Lyons.
Robertson, J. N., Wolcott.
Sayres, Alex., Marion.
Seaman, H. F., Alton.
Sheldon, A. F., Lyons.
Sherman, F. J., Lyons.
Smith, J. E., Clyde.
Sprague, L. S., Williamson.
Sutherland, L. W., Marengo.
Trowbridge, L. D., Palmyra.
Turner, Miss J. M., Lyons.
York, George D., Huron.
Young, A. A., Newark.

Number of Members, 39.

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WESTCHESTER COUNTY.

WESTCHESTER COUNTY MEDICAL SOCIETY.

(Organized May 8, 1797.)

MEETINGS—Annual, third Tuesday in June; intermediate, third Tuesday in October and February.

Officers. (*June* 20, 1882.)

Arch M. Campbell, President.
N. H. Freeland, Vice-President.
J. Francis Chapman, Secretary.
Newton F. Curtis, Treasurer.

Censors.

William H. Helm, J. J. Linson, L. F. Pelton.

Delegates to State Medical Society.

A. M. Campbell, Isaac G. Collins, A. C. Benedict.

Committee on Hygiene.

J. Francis Chapman, E. F. Brush, Valentine Brown.

Members.

Acker, T. J., Croton Landing.
Ashton, A. H., Dobb's Ferry.
Balch, G. B., Yonkers.
Benedict, A. C., Yonkers.
Brown, Valentine, Yonkers.
Brush, E. F., Mt. Vernon.
Campbell, A. M., Mt. Vernon.
Carlisle, Stuart B., Mt. Vernon.
Carpenter, W. J., Katonah.
Carruthers, H., Tarrytown.
Casselman, D. L., Purdy's Station.
Chapman, J. Frs., Katonah.
Choate, G. C. S., Pleasantville.
Churchill, J. H., Cross River.
Cibulka, Clemens, Port Chester.
Collins, Isaac G., Sing Sing.
Comfort, J E., Morrisania.
Coutant, R. B., North Tarrytown.
Crnmp, A. H., Jerome.
Curry, James H., Shrub Oak.
Curtis, Newton F., White Plains.
DeHart, H. G. V., Pleasantville.
Dorran, W. M., Mt. Vernon.
Drummond, Charles E., Bedford.
Elting, V. V., Tremont.
Fisher, George J., Sing Sing.
Fountain, Hosea, Yorktown.
Fowler, J. B., Pleasantville.
Freeland, N. H., Tarrytown.
Fulton, J. B., Irvington.
Furman, J. H., Tarrytown.
Goodwin, Thomas F., Mt. Vernon.
Hagy, J. Albert, Dobb's Ferry.
Helm, Wm. H., Sing Sing.
Hermance, E. M., Yonkers.
Hodgson, George W., White Plains.

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Hooper, Peter, Yonkers.
Horton, H. L., Morrisania.
Huntington, H. K., New Rochelle.
Husted, N. C., Tarrytown
Ives, H. M., Hastings.
Jenkins, J. F., Yonkers.
Jeschinsky, Louis, Mt. Vernon.
Judson, C. H., Dobb's Ferry.
Kretchmar, G. A., Morrisania.
Lewis, Z. E., West Farms.
Linson, John J., Tarrytown.
Matthews, E. F., Port Chester.
McElroy, S. H., Port Chester.
Miles, Charles A., Yonkers.
Mixrell, A. J., Rye Neck.
Nordquist, C. J., Tuckahoe.
Olmsted, C. O., Cross River.
Parsons, John, King's Bridge.
Patch, H. F., Chappaqua.
Pelton, Louis F., Mt. Kisco.
Pryer, Wm. C., New Rochelle.
Reinfelder, M. J., Yonkers.
Rose, A., Tarrytown.
Sands, D. J., Port Chester.
Sawyer, P. R. H., Bedford.
Schmid, H. E., White Plains.
Snowden, Alex. O., Peekskill.
Snowden, Thomas, Peekskill.
Southworth, R. J., Yonkers.
Stevens, H., Croton Landing.
Stone, Robert, Irvington.
Strang, Albert, Yorktown.
Swan, H. S., Mamaroneck.
Swift, Samuel, Yonkers.
Upham, William R., Yonkers.
Van Cortlandt, A., New Rochelle.
Varian, W. A., South Yonkers.
Warren, Nathan A., Yonkers.
Weiss, G. C., Mt. Vernon.
Wells, W. L., New Rochelle.
Wood, J. G., Creton Falls.

Number of Members, 77.

WYOMING COUNTY.

WYOMING COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, second Tuesday in June.

(*Officers. June* 13, 1882.)

E. G. Harding, President.
W. A. McFarlane, Vice-President.
S. S. Kennedy, Secretary and Treasurer.

Censors.

Delegate to State Medical Society.

George M. Palmer.

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Members.

Adams, O. B., Warsaw.
Baker, Milan, Warsaw.
Bliss, F. E., Wethersfield Springs.
Boddy, Wm. M., North Java.
Crichton, Wm., Perry Centre.
Ellis, S. G., Perry.
Harding, E. G., Wyoming.
Hunt, W. D., Gainesville.
Kennedy, S. S., Varysburgh.
Lusk, Z. J., Warsaw.
McFarlane, W. A., Pike.
Martin, W. N., Cowlesville.
Merville, Hiram P., Pike.
Miller, R. W., Castile.
Miller, Samuel S., Java.
Nichols, John C., North Java.
Palmer, George M., Pike.
Peck, Lucius, Arcade.
Rae, Robert, Portageville.
Rathbun, James P., Java.
Rudgers, D. W., Perry.
Smith, S. Chester, Castile.
Spencer, Horatio, Pike.
Woekener, John, Strykerville.

Number of Members, 24.

YATES COUNTY.

YATES COUNTY MEDICAL SOCIETY.

MEETINGS—Annual, first Tuesday in June; semi-annual, second Tuesday in January. Other meetings as directed by the Society.

Officers. (*June* 6, 1882.)

R. R. C. Bardwell, President.
B. L. Holt, Vice-President.
Cyrus C. Harvey, Secretary.
D. M. Smith, Treasurer.

Delegate to State Medical Society.

B. L. Holt.

Members.

Bardwell, R. R. C., Penn Yan.
Brundage, G. W., West Dresden.
Bush, Winans, Branchport.
Carson, A. L., Rushville.
Christie, Miss A. A., Rushville.
Crane, W. H., Penn Yan.
Harvey, Cyrus C., Dundee.
Havens, B. B., Rushville.
Holt, B. L., Penn Yan.
Lott, Schuyler, Bellona.
Lusk, N. L., Penn Yan.
Maloney, John M., Eddytown.
Newman, O. E., Potter.
Oliver, William, Penn Yan.

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Otis, A. R., Dundee.
Ovenshire, B. H., Dundee.
Seeley, F. B., Rushville.
Sloan, A. B., Bellona.
Smith, D. M., Penn Yan.
Smith, E. S., Penn Yan.
Smith, Frank, West Dresden.
Spence, Byron, Dundee.
Stevens, Jobe S., Penn Yan.
Stone, C. B., Himrods.
Stuart, E. P., Italy Hollow.
Van Dyke, C. M., Himrods.
Waddell, James M., Penn Yan.
Wilson, Wm. A., Branchport.
Wixom, William, Italy Hill.

Number of Members, 29.

Whole number of Members of County Societies	4,273
Less, number belonging to two or more Societies (about)	320
Total	3,953

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APPENDIX.

LAWS OF THE STATE OF NEW YORK, OF INTEREST TO THE MEDICAL PROFESSION, ENACTED BY THE LEGISLATURE OF 1882.

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APPENDIX.

LAWS OF THE STATE OF NEW YORK, OF INTEREST TO THE MEDICAL PROFESSION, ENACTED BY THE LEGISLATURE OF 1882.

Chapter 165, Laws of 1882.

AN ACT

In relation to the sale and use of Opium.

PASSED May 15, 1882.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Every person who opens or maintains, to be resorted to by other persons, any place where opium, or any of its preparations, is sold or given away, to be smoked at such place; and any person who at such place sells or gives away any opium, or its said preparations, to be there smoked or otherwise used, and any person who visits or resorts to any such place for the purpose of smoking opium or its said preparations, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding five hundred dollars, or by imprisonment in the penitentiary not exceeding three months, or by both such fine and imprisonment.

§2. This act shall take effect immediately.

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Chapter 209, Laws of 1882.

AN ACT

Regarding membership in the Homœopathic Medical Society of the State of New York.

PASSED May 23, 1882.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. The Homœopathic Medical Society of the State of New York shall have full power to elect such a number of permanent, delegate, or other members, as may be provided for by the constitution or by-laws of said medical society, said State medical society being hereby empowered to regulate and control its own membership.

§2. All acts and parts of acts inconsistent with this act are hereby repealed.

§3. This act shall take effect immediately.

Chapter 268, Laws of 1882.

AN ACT

To provide for the incorporation of the alumni of colleges and universities in the state of New York.

PASSED June 3, 1882.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. The alumni of any college or university, or of one or more colleges of any university, located in this state, may be incorporated by executing and filing the certificate hereinafter mentioned, and they shall thereupon become a corporation, may sue and be sued in their corporate name, shall have the powers and privileges hereafter granted, and such other powers and privileges, not inconsistent with the objects of their incorporation, as are conferred upon corporations by law.

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§ 2. The persons so desiring to be incorporated, not less than nine in number, shall execute and acknowledge, in the same manner as deeds entitled to be recorded, a certificate, which shall be recorded in the clerk's office of the county in which such college or university is located, and which shall state:

1. The name by which such corporation shall be known.

2. That the object of the formation of such corporation is to secure the benefits of this act.

3. The names of the directors of such corporation who shall act until the first annual meeting of the alumni of such college, colleges, or university, after the filing of such certificate.

§ 3. Any graduate of such college, colleges, or university, and any person who has received, upon examination, a degree from such college or university, may become a member of such corporation, by subscribing, or causing to be subscribed, his or her name to its constitution and by-laws and by complying with such other reasonable conditions as such corporation may prescribe. Such corporation may also admit to membership therein such other persons as it shall deem qualified therefor, and upon such conditions as it may from time to time prescribe.

§ 4. The corporations formed under the provisions of this act shall have power to create, manage and control a fund, to be known as an alumni fund, and for that purpose to take and acquire real and personal property by gift, devise or purchase, the net annual income of which shall not exceed ten thousand dollars, and the income thereof may be used for and applied to such object or objects connected with such college, colleges or university, as such corporation shall direct. The corporations formed under the provisions of this act shall also have power to elect from among their members such a number of directors of the college, or colleges, or university to which their members shall respectively belong, as such college, or colleges, or university shall designate; to prepare and publish from time to time an alumni record or directory; to prescribe reasonable terms and conditions upon which their members shall be entitled to vote or hold office; and to adopt such a constitution and by-laws, and such rules and regulations, as may be necessary or proper for their government and regulation, and for the accomplishment of the objects of their incorporation, not inconsistent with the laws of this state.

§ 5. The corporations formed under the provisions of this act shall elect annually from their number such a number of directors, not less than nine, as their constitutions and by-laws shall prescribe. Said corporations may also elect such

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officers and committees as their constitutions and by-laws shall prescribe. But no officer, director, or member of a committee of such corporation, except the treasurer of its board of directors, shall receive any compensation for his services as such officer, director or member of a committee. The compensation of the treasurer of the board of directors of any such corporation shall be fixed by said board of directors, and said board may refuse to grant any compensation to said treasurer.

§ 6. The directors of the corporations formed under the provisions of this act shall have the custody and management of the alumni fund, created and acquired under the provisions of this act, but they shall not permanently appropriate said fund, or any part thereof, for any purpose or object, or use the same, except such part thereof as may be necessary to defray the expense of its acquisition, investment, and management, unless duly authorized thereto by a two-thirds vote of the members of such corporation, present at an annual meeting thereof.

§ 7. The directors of the corporations formed under provisions of this act shall elect from their number a president, secretary and treasurer, neither of whom shall be the same person or shall hold any other office in said corporation: and said officers shall together prepare and execute annually a report, which shall be verified by their affidavit, and which shall show the whole amount of real and personal property owned by said corporation, where it is located, or how and where it is invested, the amount and nature of the property acquired during the year immediately preceding the date of said report, and the manner of its acquisition; the amount applied, appropriated or expended during the year immediately preceding the date of said report, and the manner of its acquisition; the amount applied, appropriated or expended during the year immediately preceding the date of said report, and the purposes, objects, or persons, to or for which such application, appropriation, or expenditure has been made. Such report shall be presented to said corporation at its annual meeting, and entered in the minutes of its proceedings, and shall, withn thirty days thereafter, filed in the clerk's office of the county in which said college or univerity is located.

§ 8. No more than one such corporation shall be formed of the alumni of any one college, and the word alumni, when used in this act, shall be construed to mean both male and female graduates. Should the alumni of two or more colleges of any university unite in forming a corporation under the provisions of this act. then but one such corporation shall be formed of the alumni of the colleges so uniting.

§ 9. This act shall take effect immediately.

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Chapter 292, Laws of 1882.

AN ACT

To regulate the standard of illuminating oils and fluids for the better protection of life, health and property.

PASSED June 6, 1882.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. No person, company or corporation shall manufacture or have in this State, or deal in, keep, sell or give away, for illuminating or heating purposes in lamps or stoves within this State, oil or burning fluid, whether the same be composed wholly or in part of naphtha, coal oil, petroleum, or products manufactured therefrom, or of other substances or materials, which shall emit an inflammable vapor which will flash at a temperature below one hundred degrees by the Fahrenheit thermometer, according to the instrument and methods used by the State Board of Health of New York.

§2. No oil or burning fluid, whether composed wholly or in part of coal oil and petroleum or their products, or other substance or material, which will ignite at a temperature below three hundred degrees by the Fahrenheit thermometer, shall be burned in any lamp, vessel or other stationary fixture of any kind, or carried as freight, in any passenger or baggage car, or passenger boat moved by steam power in this State, or in any stage or street car drawn by horses. Exceptions as regards the transportation of coal oil, petroleum and its products are hereby made when the same is securely packed in barrels or metallic packages, and permission is hereby granted for its carriage in passenger boats moved by steam power when there are no other public means of transportation. Any violation of this act shall be deemed a misdemeanor and subject the offending party or parties to a penalty not exceeding three hundred dollars, or imprisonment not exceeding six months, at the discretion of the court.

§3. It shall be the duty of the State Board of Health of New York to recommend and direct the nature of the test and instruments by which the illuminating oils, as herein before described, shall be tested in accordance with this act. It shall be the duty of the public analysts who may now be employed by the State Board of Health, or who may be hereafter appointed, to test such samples of suspected illuminating oils or

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fluids as may be submitted to them under the rules to be adopted by the said Board, for which service the said Board shall provide reasonable compensation at the first quarterly meeting of the State Board of Health held after the passage of this act; it shall adopt such measures as may seem necessary to facilitate the enforcement of this act, and prepare rules and regulations with regard to the proper methods of collecting and examining suspected samples of illuminating oils, and the State Board of Health shall be authorized to expend, in addition to all sums already appropriated for said Board, an amount not exceeding five thousand dollars, for the purpose of carrying out the provisions of this act. And the sum of five thousand dollars is hereby appropriated, out of any moneys in the treasury not otherwise appropriated for that purpose of this section provided.

§4. Naphtha and other light products of petroleum which will not stand the flash test required by this act, may be used for illuminating or heating purposes only.

In street lamps and open air receptacles apart from any building, factory or inhabited house in which the vapor is burned.

In dwellings, factories or other places of business when vaporised in secure tanks or metallic generators made for that purpose in which the vapor so generated is used for lighting or heating.

For use in the manufacture of illuminating gas in gas manufactories, situated apart from dwellings and other buildings.

§5 It shall be the duty of all district attorneys of the counties in this State, to represent and prosecute in behalf of the people within their respective counties, all cases of offenses arising under the provisions of this act.

§6. Nothing in this act shall be so construed as to interfere with the provisions of chapter seven hundred and forty-two of the laws of eighteen hundred and seventy-one, as regards the duties of the bureau of combustibles of the city of New York, or any other statutes not conflicting with this act, provided that nothing in this act shall be deemed to interfere with or supersede any regulation for the inspection and control of combustible materials in any city of this State made and established in pursuance or special or local laws or the charter of said city.

§7. All acts or parts of acts inconsistent with this act are hereby repealed.

§8. This act shall take effect sixty days after its passage.

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Chapter 308, Laws of 1882.

AN ACT

To amend section eight of chapter three hundred and twenty-two of the laws of eighteen hundred and eighty, entitled "An act to establish a state board of health."

PASSED June 6, 1882.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:—

SECTION 1. Section eight of chapter three hundred and twenty-two of the laws of eighteen hundred and eighty, entitled "An act to establish a State Board of Health," is hereby amended so as to read as follows:

§ 8. At any time the Governor of the State may require the State Board of Health to examine into nuisances affecting the security of life and health in any locality, and in such cases said Board of Health shall have all necessary powers to make such examinations, and it shall report the results thereof to the Governor, within the limits of time prescribed for such examination and report. The report of such examination, when approved by the Governor, shall be filed in the office of the Secretary of State, and the Governor may, in relation to things found and certified by the said Board of Health to be nuisances, declare them to be public nuisances, and order them to be changed, as he shall direct, or abated and removed. And such order shall be presumptive evidence of the existence of such nuisance, and all persons maintaining, or assisting to maintain, or aiding and abetting, in any manner, in the maintenance of such nuisance, after notice of such order, shall be guilty of a misdemeanor, punishable by fine not to exceed one thousand dollars, or imprisonment in the county jail of the county in which such nuisance is maintained, not to exceed one year, or by both such fine and imprisonment. In such cases, when such order has been made, the Governor may, by his further order in writing, certified under his official seal, require the district attorney, the sheriff, and the other officers of every such county to take all necessary measures to execute and to obey the order of the Governor; and any act of any such county officers in the abatement of any such nuisance, so declared, which shall be reasonable or necessary for the execution of such purpose, shall be lawful and justifiable, and the order of the Governor shall be their protection. The expense of the abatement of such nuisance shall be paid by the county

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in which such nuisance occurs, and such expense shall be a charge or a lien upon the lands maintaining such nuisance, and shall be a valid claim on behalf of said county against all persons maintaining the same, or assisting in the maintenance thereof; and the lien and claim thus created may be collected by action to recover against either or all of the persons liable to pay the same, and may also be enforced by action to enforce the lien upon the lands maintaining the nuisance, by sale thereof, to satisfy the same.

§ 2. This act shall take effect immediately.

Chapter 340, Laws of 1882.

AN ACT

Relating to the proof of age of children.

PASSED June 8, 1882.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:—

SECTION 1. Whenever in any proceeding or trial it becomes necessary to determine the age of a child, such child may be produced and exhibited to enable the magistrate, court or jury to determine its age by a personal inspection; and such court or magistrate may direct an examination by one or more physicians, whose opinion shall also be competent evidence upon the question of such age.

§ 2. This act shall take effect immediately.

Chapter 351, Laws of 1882.

AN ACT

Supplemental to chapter four hundred and thirty-one of the laws of eighteen hundred and eighty-one, entitled "An act to amend chapter three hundred and twenty-four of the laws of eighteen hundred and fifty, entitled "An act for the preservation of the public health, and the acts

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amendatory thereof." and chapter seven hundred and ninety of the laws of eighteen hundred and sixty-seven, entitled "An act to amend an act, entitled 'An act for the preservation of the public health,'" and all acts amendatory thereof.

PASSED June 15, 1882.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:—

SECTION 1. Section three of chapter four hundred and thirty-one of the laws of eighteen hundred and eighty-one, entitled "An act to amend chapter three hundred and twenty-four of the laws of eighteen hundred and fifty, entitled 'An act for the preservation of the public health, and the acts amendatory thereof,' and section one of chapter seven hundred and ninety, of the laws of eighteen hundred and sixty-seven, entitled "An act to amend an act, entitled 'An act for the preservation of the public health,' and the act entitled "An act to amend the same,'" and all acts amendatory thereof, are hereby amended so as to read as follows:

§ 3. The several boards of health now organized in any city, village or town in this State (except in the cities of New York and Brooklyn), and the several boards of health constituted under this act, as amended, shall have power and it shall be their duty:

1. To meet in their respective cities, villages and towns and fix and determine the period of quarantine to which vessels, vehicles, or persons arriving in such city, village or town shall be subject; but the said board shall have power, after an examination, to reduce the period of quarantine of such vessels, vehicles or persons, if they deem it safe to do so.

2. To prescribe the duties and powers of the local health officer; to direct him from time to time in the performance thereof, and to fix the compensation he shall receive.

3. To make orders and regulations in their discretion concerning place and mode of quarantine, the examination and purification of vessels, boats and other crafts not under quarantine; the treatment of vessels, articles or persons thereof; the regulation of intercourse with infected places; the apprehension, separation and treatment of emigrants and other persons who shall have been exposed to any infections or contagious disease; the suppression and removal of nuisances, and all such other orders and regulations as they shall think neces-

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sary and proper for the preservation of the public health, also to enter upon or within any place or premises where conditions dangerous to the public health are known or believed to exist, and by appointed members or persons to inspect and examine the same, for the protection of life and health, and for no other purpose, and all owners, agents and occupants shall permit and facilitate such sanitary examinations, and it shall be the duty of said board of health to furnish said owners or occupants a written statement of results or conclusions of such examinations.

To regulate and prohibit or prevent all communication or intercourse with all houses, tenements and places, and the persons occupying the same, in which there shall be any person who shall have been exposed to any infectious or contagious disease.

Such board of health shall have power, and it shall be its duty, to receive and examine into the nature of complaints made by any of the inhabitants, concerning causes of danger, or injury to the public health within the limits of its jurisdiction; also to report to the State Board of Health, promptly, facts which relate to infectious and epidemic diseases within said jurisdiction, and to require such isolation and quarantining of persons, vessels and sources of infection as shall be in its judgment necessary; also to release from such isolation or quarantine such persons, vessels and things as it shall deem safe to release; but upon ordering such quarantining or isolation, or such release from the same, said board and its health officers shall make a record of the facts in the case, and of the reasons for the action taken. It shall also be the duty of the said local board, to procure suitable places for the reception of persons and things infected with malignant, contagious or infectious diseases and in all cases where sick persons cannot otherwise be provided for, to procure for them medical, and other attendance and necessaries; and it shall be the duty of every such board of health to take cognizance of, and report every case of small-pox or varioloid, occurring within said board's jurisdiction, also to make all needful provisions for immediately obtaining the necessary means for thorough and safe vaccination of all persons within the said jurisdiction who may need the same. It shall also be the duty of the board of health in each town, village and city in this state to have the supervision of the registration of deaths, diseases and the causes of death, and by its appointed officers, to examine all certificates and records of death, and findings of coroner's juries, and to designate the persons who shall grant permits for the burial of the dead, and to prescribe sanitary regulations for such burials, and there shall be no burial of any dead person until a certificate of the death and its causes, if known, shall have been

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made and presented as required by the laws of this state, and until thereupon a permit for burial shall have been given as provided by said laws; and it shall be the duty of every such board of health to supervise and make complete the registration of births, deaths and marriages within the limits of its jurisdiction, and in so completing the said registration the cost thereof shall be a charge upon such town, village or city, and shall not exceed fifty cents for each completely verified and registered record of a birth, death or marriage, but the town clerks and the registering clerks provided by law in villages and cities may still keep all records of births, deaths and marriages as required by chapter five hundred and twelve, laws of eighteen hundred and eighty, and in any place in this state in which the State Board of Health ascertains that said registration is not completely and well made, said State Board shall notify the local board of health and the registering clerk, whose duty it is to make the registration in such place, that within three months from the date of such notice, said defects and neglect in the records must be amended and prevented. If at the expiration of the time mentioned said neglect and defects are not overcome and prevented by said local authorities, it shall be the duty of the State Board of Health to take such control of, and adopt such means for causing compliance with rules and regulations for the said records, as will secure their completeness and proper registration within the limit of cost hereinbefore specified, and until the said local officers shall agree to and actually make the said records and registry complete as required by law. Any refusal or willful neglect on the part of any person whose duty it is to make out or file for registration any record or records as aforesaid, and any officer or board that shall neglect or refuse to register and preserve said records as required by law, shall be deemed guilty of a misdemeanor, and may be prosecuted in any court of competent jurisdiction.

6. To publish from time to time all such orders and regulations of general obligation as they shall have made, in such manner as to secure early and full publicity thereto, and to make, without publication thereof, such orders and regulations in special or individual cases, not of general application, as they may see fit, concerning the suppression and removal of nuisances, and concerning all other matters in their judgment detrimental to the public health, and to serve copies thereof upon any occupant or occupants of any premises whereon any such nuisances or other matters aforesaid shall exist, or by posting the same in some conspicuous place on such premises.

7. To issue warrants to any constable of their respective cities, villages or towns to apprehend and remove such per-

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sons as cannot otherwise be subjected to the orders and regulations by them adopted; and, whenever it shall be necessary to do so, to issue their warrant to the sheriff of their respective counties to bring to their aid the power of the county; all which warrants shall be forthwith executed by the officers to whom they shall be directed, who shall possess the like powers and be subject to the like duties in the execution thereof, as if the same had been duly issued out of any court of record in this State.

8. To employ all such persons as shall be necessary to enable them to carry into effect the orders or regulations they shall have adopted, published and made, and the powers vested in them by this act, and to fix their compensation.

9. To impose penalties for the violation of, or non-compliance with, their orders and regulations, and to maintain actions in any court of competent jurisdiction to collect such penalties, not exceeding one hundred dollars in any one case, or to restrain by injunction such violations, or otherwise to enforce such orders and regulations.

§2. Section four of chapter three hundred and twenty-four of the laws of eighteen hundred and fifty, as amended by chapter seven hundred and ninety of the laws of eighteen hundred and sixty-seven, is hereby amended so as to read as follows:

§4. Every person who shall willfully violate or refuse to obey any order or regulation so made and published, or any order so made and served, or posted as aforesaid, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be subject to fine or imprisonment, or both, in the discretion of the court, such fine not to exceed one thousand dollars nor such imprisonment six months. And in any case of non-compliance with any order or regulation which shall have been so served or posted, as provided in subdivision six of section three of said act as hereby amended, the said board or its servants or employees may lawfully enter upon any premises to which such order or regulation relates, and suppress or remove the nuisance or other matters in the judgment of said board detrimental to the public health mentioned in such order or regulation, and any other nuisance or matter of the description aforesaid found there existing; and the expense thereof shall be charged upon the occupant or any or all the occupants of said premises, and may be sued for and recovered with costs by said board in the name of such board in any court having jurisdiction. Whenever execution upon any judgment so obtained shall have been returned wholly or in part unsatisfied, said judgment, for the amount so unsatisfied shall

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be a lien upon said premises, having preference over all other liens or incumbrances whatsoever. But in order to acquire such lien, such judgment, if in a court not of record, shall first have been docketed in the same place and manner as by law now required to make judgments in such courts liens upon real estate. And whenever any lien upon any premises shall have become fixed as aforesaid, the said board may cause the said premises to be sold at public auction, for a term of time, for the payment and satisfaction of such lien, and the expenses of such sale, giving notice of such sale for twelve weeks successively, once in each week, in one or more newspapers published in the city, incorporated village or town where the premises are situated, as the case may be; or if no newspaper be published in such village or town, then in the newspaper published nearest said premises, and also serving a copy of such notice of sale personally on the owner or agent of said premises, if known, and a resident of said city, village or town, at least fourteen days previous to such sale, or by depositing the same in the post-office directed to such owner or agent at his place of residence, if known, or the nearest post-office thereto, at least twenty-eight days previous to such sale. And the said premises shall be sold to the person who shall offer to take the same for the shortest time, paying the amount remaining unpaid upon such judgment, with interest, and the expense of such notice and sale. A certificate of such sale, signed by the president and counter-signed by the secretary of such board,, shall thereupon be made and delivered to the purchaser, and may be recorded in like manner and with like effect as deeds of conveyance of lands, and thereupon the purchaser, his heirs or assigns, shall be entitled to the possession of said premises so sold as aforesaid, and if unoccupied may immediately enter, and if occupied may have remedy against any occupant by action or by summary proceedings, as against a tenant holding over after expiration of his term; and in case the cost of such action or proceeding shall not be collected by such purchaser of the defendant therein, the same shall be a lien upon said premises, having the like preference as the lien aforesaid, and the term of the said purchaser shall be extended during a time bearing the same proportion to the original term as the amount of such cost bears to the amount paid by such purchaser on such sale. And such term shall commence when such purchaser shall have acquired possession. At any time after such sale, and within six months after the recording of such certificate as aforesaid, the owner or any lienor or incumbrancer of such premises, or of any part thereof, may redeem by paying to the purchaser the amount paid by him on such sale, and all costs and expenses he may have incurred in any action or proceeding as aforesaid to obtain possession, with ten per centum interest thereon. If such redemption be

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made by the owner, the right of the purchaser shall be extinguished; and if by such lienor or incumbrancer, the amount paid by him to redeem shall be added to his lien or incumbrance, or if he have more than one, to the oldest, and shall thenceforth partake of the nature thereof and be collectible by any remedy adapted thereto.

§ 3. Section five of chapter three hundred and twenty-four of the laws of eighteen hundred and fifty, as amended by chapter seven hundred and ninety of the laws of eighteen hundred and sixty-seven, and chapter seven hundred and sixty-one of the laws of eighteen hundred and sixty-eight, is hereby amended so as to read as follows:

§ 5. All expenses incurred by the several boards of health under their official orders or regulations, or under requirements of the statutes in the execution and performance of the duties imposed by this act shall be a charge only on their respective cities, villages and towns; and shall be audited, levied, collected and paid in the same manner as other city, village and town charges are audited, levied, collected and paid.

§ 4. Section six of chapter three hundred and twenty-four of the laws of eighteen hundred and fifty, as amended by chapter seven hundred and ninety of the laws of eighteen hundred and sixty-seven, and all acts amendatory thereof is hereby amended so as to read as follows:

§ 6. Whenever any pestilential or infectious or contagious disease shall exist in any county poor-house, in this State, or in the vicinity of any such county poor-house, and the physician of such county poor-house shall certify that such pestilence or disease is likely to endanger the health of the persons supported at such poor-house, the superintendent of such county poor-house shall have power to cause the persons supported at such county poor-house, or any of them, to be removed to such other suitable place in the same county as shall be designated by the board of health of the city, town or village within which such poor-house shall be, there to be maintained and provided for at the expense of the county, with all necessary medical care and attendance, until they shall be safely returned to the county poor-house from which they were taken or otherwise discharged.

§ 5. All acts and parts of acts inconsistent with this act are hereby repealed.

§ 6. This act shall take effect immediately.

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Chapter 367, Laws of 1882.:

AN ACT

To restrict the formation of corporations under chapter three hundred and nineteen of the laws of eighteen hundred and forty-eight, entitled "An act to provide for the incorporation of benevolent, charitable, scientific and missionary societies," and the acts amendatory thereof, and to legalize the incorporation of certain societies organized thereunder, and to regulate the same.

PASSED June 29, 1882.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Hereafter no literary or scientific college or university shall be incorporated under the provisions of chapter three hundred and nineteen of the laws of eighteen hundred and forty-eight, entitled "An act to provide for the incorporation of benevolent, charitable, scientific and missionary societies," and the acts amendatory thereof, without the approval of the regents of the university of the state of New York, to be indorsed upon and filed with the certificate of incorporation and the said regents as a condition of such approval may impose such conditions as in their judgment they shall deem advisable, which shall not conflict with said acts.

§ 2. All scientific and all literary eolleges and universities, organized under said acts, which shall have reported to the said regents within the two years last passed are hereby declared legally incorporated, and all degrees heretofore and hereafter conferred by them are declared valid; and all such colleges and universities shall be subject to the same duties, obligations and liabilities and to the same control and visitation of said regents as colleges and universities chartered by said regents.

§ 3. All acts and parts of acts inconsistent herewith are hereby repealed.

§ 4. This act shall take effect immediately.

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